



13351 Scenic Highway
Baton Rouge, LA 70807
225.778.1234
Fax 225.778.3510
www.cleanharbors.com

November 19, 2004

Ms. Stephanie B. Doolan, RCRA Corrective Action Officer
U.S. EPA, Region 7
Air, RCRA, and Toxics Division
901 North 5th Street
Kansas City, Kansas 66101

Subject: Copy of RCRA Permit Renewal Application Parts A & B Dated 10/8/04
Clean Harbors Kansas, LLC Facility
Wichita, Kansas
EPA ID # KSD007246846

Dear Ms. Doolan:

As requested in our meeting on October 18, 2004, we are transmitting herewith a copy of the RCRA Permit Renewal Application submitted on October 8, 2004 for the Clean Harbors Kansas, LLC Facility located in Wichita, Kansas.

Should you have any questions or need additional information, please do not hesitate to contact me at 225-778-3596. Thanks for your continued cooperation.

Sincerely,

A handwritten signature in dark ink, appearing to read "John C. Arbuthnot", is written over a horizontal line.

John C. Arbuthnot, P.E.
Senior Remediation Manager

Attachment

RCRA



551113

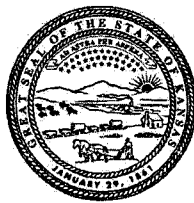


**Clean Harbors Kansas, LLC
RCRA Permit Application
Parts A & B**

**Clean Harbors Kansas, LLC
2549 North New York Avenue
Wichita, Kansas 67219
Telephone: 316/269-7400 Fax: 316/269-7455**

**Submitted To:
State of Kansas Department of Health and Environment**

October 8, 2004



KANSAS

RODERICK L. BREMBY, SECRETARY

KATHLEEN SEBELIUS, GOVERNOR

DEPARTMENT OF HEALTH AND ENVIRONMENT

October 21, 2004

Mr. Lon R. Stewart
Regulatory Compliance Manager
Clean Harbors Kansas, LLC
1340 West Lincoln Street
Phoenix, Arizona 85007

RE: Permit Status
Clean Harbors Kansas, LLC - Wichita
EPA ID# KSD007246846

Dear Mr. Stewart:

The RCRA Hazardous Waste Management Permit for the Clean Harbors Kansas facility in Wichita, Kansas will expire on April 7, 2005. The Kansas Department of Health and Environment received a renewal application dated October 8, 2004. Since a timely application was submitted and in accordance with Permit Condition I.E.3 and 40 CFR 270.51, the permit and all permit conditions remain in effect until a new permit is issued.

The review of the facility's permit application is scheduled for the first quarter of next year. Should you have any questions, please feel free to call me at (785) 296-6562.

Sincerely,

Shawn A. Howell, P.E.
Chief, Operating Facilities Unit
Hazardous Waste Permits Section

cc: Bill Bider - KDHE/BWM
John Paul Goetz - DEA/SCDO
Lisa Haugen - EPA Region VII - ARTD/RESP



1340 West Lincoln Street
Phoenix, AZ 85007
Phone 602.258.6155
Fax 602.462.2391

October 8, 2004

Mr. Shawn Howell
Hazardous Waste Permits Section
Bureau of Waste Management
1000 SW Jackson, Suite 320
Topeka, Kansas 66612-1366

RE: Submittal of Part B Renewal Application
Clean Harbors Kansas, LLC
Wichita, Kansas
EPA ID# KSD 007246846

Dear Mr. Howell:

The Part B Renewal Application is being submitted to the Kansas Department of Health and Environment 180 days prior to expiration of the existing permit and to continue regulated activities after the permit expires as per permit condition I.E.2.

The Part A application has been updated with the most recent forms. The Part A is included in the Part B submittal. The storage limitations remain the same as the previous Part A submission.

If you have questions regarding this application, I can be contacted at 602-462-2315. We await the response to your review.

Sincerely,

A handwritten signature in black ink, appearing to read "Lon Stewart", is written over a horizontal line.

Lon R. Stewart
Regulatory Compliance Manager

enclosure: Updated Part B Application



**Clean Harbors Kansas, LLC
RCRA Permit Application
Parts A & B**

**Clean Harbors Kansas, LLC
2549 North New York Avenue
Wichita, Kansas 67219
Telephone: 316/269-7400 Fax: 316/269-7455**

**Submitted To:
State of Kansas Department of Health and Environment**

October 8, 2004

Clean Harbors Kansas, LLC

Part B Renewal Application

TABLE OF CONTENTS

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SECTION K: Financial Requirements

SECTION M: Miscellaneous Units

SECTION N: Air Emissions

October 8, 2004

EPA ID No. K S D 0 0 7 2 4 6 8 4 6

10. Type of Regulated Waste Activity (Mark 'X' in the appropriate boxes. See instructions on pages 28 to 32)**A. Hazardous Waste Activities****1. Generator of Hazardous Waste**

(choose only one of the following three categories)

- ☒ a. LQG: Greater than 1,000 kg/mo (2,200 lbs./mo.) of non-acute hazardous waste; or
- ☐ b. SQG: 100 to 1,000 kg/mo (220 - 2,200 lbs./mo.) of non-acute hazardous waste; or
- ☐ c. CESQG: Less than 100 kg/mo (220 lbs./mo.) of non-acute hazardous waste

In addition, indicate other generator activities (check all that apply)

- ☐ d. United States Importer of Hazardous Waste
- ☐ e. Mixed Waste (hazardous and radioactive) Generator

For Items 2 through 6, check all that apply:

- ☐ 2. Transporter of Hazardous Waste
- ☒ 3. Treater, Storer, or Disposer of Hazardous Waste (at your site) Note: A hazardous waste permit is required for this activity.
- ☐ 4. Recycler of Hazardous Waste (at your site) Note: A hazardous waste permit may be required for this activity.
5. Exempt Boiler and/or Industrial Furnace
- ☐ a. Small Quantity On-site Burner Exemption
- ☐ b. Smelting, Melting, and Refining Furnace Exemption
- ☐ 6. Underground Injection Control

B. Universal Waste Activities

1. Large Quantity Handler of Universal Waste (accumulate 5,000 kg or more) [refer to your State regulations to determine what is regulated]. Indicate types of universal waste generated and/or accumulated at your site. (check all boxes that apply):

	Generated	Accumulated
a. Batteries	<input type="checkbox"/>	<input type="checkbox"/>
b. Pesticides	<input type="checkbox"/>	<input type="checkbox"/>
c. Thermostats	<input type="checkbox"/>	<input type="checkbox"/>
d. Lamps	<input type="checkbox"/>	<input type="checkbox"/>
e. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>
f. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>
g. Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>

☐ 2. Destination Facility for Universal Waste

Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities**1. Used Oil Transporter - Indicate Type(s) of Activity(ies)**

- ☐ a. Transporter
- ☐ b. Transfer Facility

2. Used Oil Processor and/or Re-refiner - Indicate Type(s) of Activity(ies)

- ☐ a. Processor
- ☐ b. Re-refiner

☐ 3. Off-Specification Used Oil Burner**4. Used Oil Fuel Marketer - Indicate Type(s) of Activity(ies)**

- ☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
- ☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

11. Description of Hazardous Wastes (See instructions on page 33)

A. Waste Codes for Federally Regulated Hazardous Wastes. Please list the waste codes of the Federal hazardous wastes handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more spaces are needed.

All US EPA Hazardous Waste Codes						

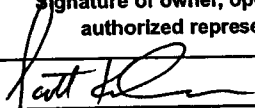
EPA ID No. K S D 0 0 7 2 4 6 8 4 6

B. Waste Codes for State-Regulated (i.e., non-Federal) Hazardous Wastes. Please list the waste codes of the State-regulated hazardous wastes handled at your site. List them in the order they are presented in the regulations. Use an additional page if more spaces are needed for waste codes.

12. Comments (See Instructions on page 33)

Submission of RCRA Part B Permit Renewal Application

13. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (See instructions on page 33)

Signature of owner, operator, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm/dd/yyyy)
	Vice President of Environmental Compliance	10/08/2004

United States Environmental Protection Agency
HAZARDOUS WASTE PERMIT INFORMATION FORM

1. Facility Permit Contact (See instructions on page 35)	First Name: Lon	MI: R	Last Name: Stewart
	Phone Number: 602-462-2315		Phone Number Extension:
2. Facility Permit Contact Mailing Address (See instructions on page 35)	Street or P.O. Box: 1340 W Lincoln Street		
	City, Town, or Village: Phoenix		
	State: Arizona		
	Country: USA		Zip Code: 85007
3. Legal Owner Mailing Address and Telephone Number (See instructions on page 36)	Street or P.O. Box: 2549 N New York		
	City, Town, or Village: Wichita		
	State: Kansas		
	Country: USA	Zip Code: 67219-4322	Phone Number: 316-269-7400
4. Operator Mailing Address and Telephone Number (See instructions on page 36)	Street or P.O. Box: 2549 N New York		
	City, Town, or Village: Wichita		
	State: Kansas		
	Country: USA	Zip Code: 67219-4322	Phone Number: 316-269-7400
5. Facility Existence Date (See instructions on page 36)	Facility Existence Date (mm/dd/yyyy): 06/01/1979		
6. Other Environmental Permits (See instructions on page 36)			
A. Permit Type (Enter code)	B. Permit Number		C. Description
	<div style="display: flex; justify-content: space-around;"> 33200161 </div>		Kansas Dept. of Health and Environment Air Emission Permit
7. Nature of Business (Provide a brief description; see instructions on page 37)			
<p>The facility stores waste solvent, hydrocarbons, paint related waste streams, solids, corrosive waste streams, and water-based waste streams. The site also processes and/or distributes waste solvents, solids and water to other EPA approved facilities for distillation, beneficial reuse or disposal. All wastes are removed from this site.</p>			

Process Codes and Design Capacities (See instructions on page 37)

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Thirteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in Item 9.

B. PROCESS DESIGN CAPACITY - For each code entered in column A, enter the capacity of the process.

1. **AMOUNT** - Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.

2. **UNIT OF MEASURE** - For each amount entered in column B(1), enter the code in column B(2) from the list of unit of measure codes below that describes the unit of measure used. Select only from the units of measure in this list.

C. PROCESS TOTAL NUMBER OF UNITS - Enter the total number of units for each corresponding process code.

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
D79	<u>Disposal:</u> Underground Injection	Gallons; Liters; Gallons Per Day; or Liters Per Day	T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
D80	Well Disposal	Acre-feet; Hectare-meter; Acres; Cubic Meters; Hectares; Cubic Yards	T82	Lime Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
D81	Landfill	Acres or Hectares	T83	Aggregate Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
D82	Land Treatment	Gallons Per Day or Liters Per Day	T84	Phosphate Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
D83	Ocean Disposal	Gallons; Liters; Cubic Meters; or Cubic Yards	T85	Coke Oven	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
D99	Surface Impoundment Disposal	Any Unit of Measure Listed Below	T86	Blast Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
S01	<u>Storage:</u> Container	Gallons; Liters; Cubic Meters; or Cubic Yards	T87	Smelting, Melting, or Refining Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
S02	Tank Storage	Gallons; Liters; Cubic Meters; or Cubic Yards	T88	Titanium Dioxide Chloride Oxidation Reactor	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
S03	Waste Pile	Cubic Yards or Cubic Meters	T89	Methane Reforming Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
S04	Surface Impoundment Storage	Gallons; Liters; Cubic Meters; or Cubic Yards	T90	Pulping Liquor Recovery Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
S05	Drip Pad	Gallons; Liters; Acres; Cubic Meters; Hectares; or Cubic Yards	T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid Halogen Acid Furnaces Other Industrial Furnaces Listed In 40 CFR §260.10	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Liters Per Hour; Kilograms Per Hour; or Million Btu Per Hour
S06	Containment Building Storage	Cubic Yards or Cubic Meters	T92		
S99	Other Storage	Any Unit of Measure Listed Below	T93		
T01	<u>Treatment:</u> Tank Treatment	Gallons Per Day; Liters Per Day; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; or Metric Tons Per Hour	T94	Containment Building - Treatment	Cubic Yards; Cubic Meters; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; Gallons Per Day; Liters Per Day; or Million Btu Per Hour
T02	Surface Impoundment Treatment	Gallons Per Day; Liters Per Day; Short Tons Per Hour; Gallons Per Hour; Liters Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Metric Tons Per Day; or Metric Tons Per Hour		<u>Miscellaneous (Subpart X)</u>	
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; Btu Per Hour; Pounds Per Hour; Short Tons Per Day; Kilograms Per Hour; Gallons Per Day; Liters Per Day; Metric Tons Per Hour; or Million Btu Per Hour	X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; Gallons Per Day; Liters Per Day; or Million Btu Per Hour	X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; Kilograms Per Hour; Gallons Per Hour; Liters Per Hour; or Gallons Per Day
T80	Boiler	Gallons; Liters; Gallons Per Hour; Liters Per Hour; Btu Per Hour; or Million Btu Per Hour	X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; Btu Per Hour; or Million Btu Per Hour
			X04	Geologic Repository	Cubic Yards; Cubic Meters; Acre-feet; Hectare-meter; Gallons; or Liters
			X99	Other Subpart X	Any Unit of Measure Listed Below

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons.....	G	Short Tons Per Hour.....	D	Cubic Yards.....	Y
Gallons Per Hour.....	E	Metric Tons Per Hour.....	W	Cubic Meters.....	C
Gallons Per Day.....	U	Short Tons Per Day.....	N	Acres.....	B
Liters.....	L	Metric Tons Per Day.....	S	Acre-feet.....	A
Liters Per Hour.....	H	Pounds Per Hour.....	J	Hectares.....	Q
Liters Per Day.....	V	Kilograms Per Hour.....	R	Hectare-meter.....	F
		Million Btu Per Hour.....	X	Btu Per Hour.....	I

8. Process Codes and Design Capacities (Continued)

EXAMPLE FOR COMPLETING Item 8 (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY		C. Process Total Number of Units	For Official Use Only
		(1) Amount (Specify)	(2) Unit of Measure (Enter code)		
X 1	S 0 2	5 3 3 . 7 8 8	G	0 0 1	
1		See additional sheets attached			
2					
3					
4					
5					
6					
7					
8					
9					
1 0					
1 1					
1 2					
1 3					

NOTE: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item 9.

9. Other Processes (See instructions on page 37 and follow instructions from Item 8 for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in sequence with Item 8)	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY		C. Process Total Number of Units	D. Description of Process
		(1) Amount (Specify)	(2) Unit of Measure (Enter code)		
X 1	T 0 4	.	.		In-situ Vitrification
1		.	.		
See additional sheets attached					
2		.	.		
3		.	.		
4		.	.		

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA I.D. Number (Enter from page 1)												Secondary ID Number (Enter from page 1)											
K	S	D	0	0	7	2	4	6	8	4	6												

XIV. Description of Hazardous Wastes

Line Number		A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES											
		(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))											
	1	D	0	0	1	7000000	P	S	0	1	S	0	2	T	0	4	X02		
	2	D	0	0	2	275000	P	S	0	1	S	0	2	T	0	4	X02		
	3	D	0	0	3	400000	P	S	0	1	S	0	2	T	0	4	X02		
	4	D	0	0	4	100000	P	S	0	1	S	0	2	T	0	4	X02		
	5	D	0	0	5	100000	P	S	0	1	S	0	2	T	0	4	X02		
	6	D	0	0	6	100000	P	S	0	1	S	0	2	T	0	4	X02		
	7	D	0	0	7	100000	P	S	0	1	S	0	2	T	0	4	X02		
	8	D	0	0	8	100000	P	S	0	1	S	0	2	T	0	4	X02		
	9	D	0	0	9	100000	P	S	0	1	S	0	2	T	0	4	X02		
1	0	D	0	1	0	100000	P	S	0	1	S	0	2	T	0	4	X02		
1	1	D	0	1	1	100000	P	S	0	1	S	0	2	T	0	4	X02		
1	2	D	0	1	2	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	3	D	0	1	3	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	4	D	0	1	4	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	5	D	0	1	5	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	6	D	0	1	6	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	7	D	0	1	7	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	8	D	0	1	8	600000	P	S	0	1	S	0	2	T	0	4	X02		
1	9	D	0	1	9	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	0	D	0	2	0	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	1	D	0	2	1	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	2	D	0	2	2	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	3	D	0	2	3	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	4	D	0	2	4	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	5	D	0	2	5	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	6	D	0	2	6	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	7	D	0	2	7	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	8	D	0	2	8	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	9	D	0	2	9	60000	P	S	0	1	S	0	2	T	0	4	X02		
3	0	D	0	3	0	60000	P	S	0	1	S	0	2	T	0	4	X02		
3	1	D	0	3	1	60000	P	S	0	1	S	0	2	T	0	4	X02		
3	2	D	0	3	2	60000	P	S	0	1	S	0	2	T	0	4	X02		
3	3	D	0	3	3	60000	P	S	0	1	S	0	2	T	0	4	X02		

Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSA No. 0248-EPA-OT

Secondary ID Number (Enter from page 1)

[illegible]

XIV: Description of Hazardous Wastes

[illegible]

Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSA No. 0248-EPA-OT

Secondary ID Number: (Enter from page 1)

[illegible][illegible][illegible]

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSA No. 0248-EPA-OT

EPA I.D. Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

K S D 0 0 7 2 4 6 8 4 6

XIV. Description of Hazardous Wastes

Line Number		A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES									
		(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))									
	1	K	O	O	1	60000	P	S	O	1	S	O	2	T	O	4	X02
	2	K	O	O	2	60000	P	S	O	1	S	O	2	T	O	4	X02
	3	K	O	O	3	60000	P	S	O	1	S	O	2	T	O	4	X02
	4	K	O	O	4	60000	P	S	O	1	S	O	2	T	O	4	X02
	5	K	O	O	5	60000	P	S	O	1	S	O	2	T	O	4	X02
	6	K	O	O	6	60000	P	S	O	1	S	O	2	T	O	4	X02
	7	K	O	O	7	60000	P	S	O	1	S	O	2	T	O	4	X02
	8	K	O	O	8	60000	P	S	O	1	S	O	2	T	O	4	X02
	9	K	O	O	9	60000	P	S	O	1	S	O	2	T	O	4	X02
1	0	K	O	1	0	60000	P	S	O	1	S	O	2	T	O	4	X02
1	1	K	O	1	1	60000	P	S	O	1	S	O	2	T	O	4	X02
1	2	K	O	1	3	60000	P	S	O	1	S	O	2	T	O	4	X02
1	3	K	O	1	4	60000	P	S	O	1	S	O	2	T	O	4	X02
1	4	K	O	1	5	60000	P	S	O	1	S	O	2	T	O	4	X02
1	5	K	O	1	6	60000	P	S	O	1	S	O	2	T	O	4	X02
1	6	K	O	1	7	60000	P	S	O	1	S	O	2	T	O	4	X02
1	7	K	O	1	8	60000	P	S	O	1	S	O	2	T	O	4	X02
1	8	K	O	1	9	60000	P	S	O	1	S	O	2	T	O	4	X02
1	9	K	O	2	0	60000	P	S	O	1	S	O	2	T	O	4	X02
2	0	K	O	2	1	60000	P	S	O	1	S	O	2	T	O	4	X02
2	1	K	O	2	2	60000	P	S	O	1	S	O	2	T	O	4	X02
2	2	K	O	2	3	60000	P	S	O	1	S	O	2	T	O	4	X02
2	3	K	O	2	4	60000	P	S	O	1	S	O	2	T	O	4	X02
2	4	K	O	2	5	60000	P	S	O	1	S	O	2	T	O	4	X02
2	5	K	O	2	6	60000	P	S	O	1	S	O	2	T	O	4	X02
2	6	K	O	2	7	60000	P	S	O	1	S	O	2	T	O	4	X02
2	7	K	O	2	8	60000	P	S	O	1	S	O	2	T	O	4	X02
2	8	K	O	2	9	60000	P	S	O	1	S	O	2	T	O	4	X02
2	9	K	O	3	0	60000	P	S	O	1	S	O	2	T	O	4	X02
3	0	K	O	3	1	60000	P	S	O	1	S	O	2	T	O	4	X02
3	1	K	O	3	2	60000	P	S	O	1	S	O	2	T	O	4	X02
3	2	K	O	3	3	60000	P	S	O	1	S	O	2	T	O	4	X02
3	3	K	O	3	4	60000	P	S	O	1	S	O	2	T	O	4	X02

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSANo. 0248-EPA-OT

EPA ID Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

K S D 0 0 7 2 4 6 8 4 6

XIV: Description of Hazardous Wastes

Line Number	A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES											
	(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))											
	1	K	O	3	5	60000	P	S	O	1	S	O	2	T	O	4	X02	
	2	K	O	3	6	60000	P	S	O	1	S	O	2	T	O	4	X02	
	3	K	O	3	7	60000	P	S	O	1	S	O	2	T	O	4	X02	
	4	K	O	3	8	60000	P	S	O	1	S	O	2	T	O	4	X02	
	5	K	O	3	9	60000	P	S	O	1	S	O	2	T	O	4	X02	
	6	K	O	4	0	60000	P	S	O	1	S	O	2	T	O	4	X02	
	7	K	O	4	1	60000	P	S	O	1	S	O	2	T	O	4	X02	
	8	K	O	4	2	60000	P	S	O	1	S	O	2	T	O	4	X02	
	9	K	O	4	3	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	0	K	O	4	4	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	1	K	O	4	5	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	2	K	O	4	6	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	3	K	O	4	7	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	4	K	O	4	8	100000	P	S	O	1	S	O	2	T	O	4	X02	
1	5	K	O	4	9	100000	P	S	O	1	S	O	2	T	O	4	X02	
1	6	K	O	5	0	100000	P	S	O	1	S	O	2	T	O	4	X02	
1	7	K	O	5	1	500000	P	S	O	1	S	O	2	T	O	4	X02	
1	8	K	O	5	2	100000	P	S	O	1	S	O	2	T	O	4	X02	
1	9	K	O	6	0	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	0	K	O	6	1	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	1	K	O	6	2	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	2	K	O	6	4	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	3	K	O	6	5	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	4	K	O	6	6	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	5	K	O	6	9	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	6	K	O	7	1	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	7	K	O	7	3	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	8	K	O	8	3	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	9	K	O	8	4	60000	P	S	O	1	S	O	2	T	O	4	X02	
3	0	K	O	8	5	200000	P	S	O	1	S	O	2	T	O	4	X02	
3	1	K	O	8	6	200000	P	S	O	1	S	O	2	T	O	4	X02	
3	2	K	O	8	7	60000	P	S	O	1	S	O	2	T	O	4	X02	
3	3	K	O	8	8	60000	P	S	O	1	S	O	2	T	O	4	X02	

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 9-30-96
GS No. 0248-EPA-OT

EPA I.D. Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

K S D 0 0 7 2 4 6 8 4 6

XIV. Description of Hazardous Wastes

Line Number	A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES										
	(1) PROCESS CODES (Enter code)										(2) PROCESS DESCRIPTION (If a code is not entered in D(1))						
	1	K	O	9	0	60000	P	S	O	1	S	O	2	T	O	4	X02
	2	K	O	9	1	60000	P	S	O	1	S	O	2	T	O	4	X02
	3	K	O	9	3	60000	P	S	O	1	S	O	2	T	O	4	X02
	4	K	O	9	4	60000	P	S	O	1	S	O	2	T	O	4	X02
	5	K	O	9	5	60000	P	S	O	1	S	O	2	T	O	4	X02
	6	K	O	9	6	60000	P	S	O	1	S	O	2	T	O	4	X02
	7	K	O	9	7	60000	P	S	O	1	S	O	2	T	O	4	X02
	8	K	O	9	8	60000	P	S	O	1	S	O	2	T	O	4	X02
	9	K	O	9	9	60000	P	S	O	1	S	O	2	T	O	4	X02
1	0	K	1	0	0	60000	P	S	O	1	S	O	2	T	O	4	X02
1	1	K	1	0	1	60000	P	S	O	1	S	O	2	T	O	4	X02
1	2	K	1	0	2	60000	P	S	O	1	S	O	2	T	O	4	X02
1	3	K	1	0	3	60000	P	S	O	1	S	O	2	T	O	4	X02
1	4	K	1	0	4	60000	P	S	O	1	S	O	2	T	O	4	X02
1	5	K	1	0	5	60000	P	S	O	1	S	O	2	T	O	4	X02
1	6	K	1	0	6	60000	P	S	O	1	S	O	2	T	O	4	X02
1	7	K	1	0	7	60000	P	S	O	1	S	O	2	T	O	4	X02
1	8	K	1	0	8	60000	P	S	O	1	S	O	2	T	O	4	X02
1	9	K	1	0	9	60000	P	S	O	1	S	O	2	T	O	4	X02
2	0	K	1	1	0	60000	P	S	O	1	S	O	2	T	O	4	X02
2	1	K	1	1	1	60000	P	S	O	1	S	O	2	T	O	4	X02
2	2	K	1	1	2	60000	P	S	O	1	S	O	2	T	O	4	X02
2	3	K	1	1	3	60000	P	S	O	1	S	O	2	T	O	4	X02
2	4	K	1	1	4	60000	P	S	O	1	S	O	2	T	O	4	X02
2	5	K	1	1	5	60000	P	S	O	1	S	O	2	T	O	4	X02
2	6	K	1	1	6	60000	P	S	O	1	S	O	2	T	O	4	X02
2	7	K	1	1	7	60000	P	S	O	1	S	O	2	T	O	4	X02
2	8	K	1	1	8	60000	P	S	O	1	S	O	2	T	O	4	X02
2	9	K	1	2	3	60000	P	S	O	1	S	O	2	T	O	4	X02
3	0	K	1	2	4	60000	P	S	O	1	S	O	2	T	O	4	X02
3	1	K	1	2	5	60000	P	S	O	1	S	O	2	T	O	4	X02
3	2	K	1	2	6	60000	P	S	O	1	S	O	2	T	O	4	X02
3	3	K	1	3	1	60000	P	S	O	1	S	O	2	T	O	4	X02

Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSA No. 0248-EPA-OT

Secondary ID Number (Enter from page 1)

[illegible][illegible][illegible]

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Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSA No. 0246-EPA-OT

EPA ID Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

K S D 0 0 7 2 4 6 8 4 6

XIV: Description of Hazardous Wastes

Line Number	A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES										
	(1) PROCESS CODES (Enter code)							(2) PROCESS DESCRIPTION (If a code is not entered in D(1))									
	1	P	O	O	1	60000	P	S	O	1	S	O	2	T	O	4	X02
	2	P	O	O	2	60000	P	S	O	1	S	O	2	T	O	4	X02
	3	P	O	O	3	60000	P	S	O	1	S	O	2	T	O	4	X02
	4	P	O	O	4	60000	P	S	O	1	S	O	2	T	O	4	X02
	5	P	O	O	5	60000	P	S	O	1	S	O	2	T	O	4	X02
	6	P	O	O	6	60000	P	S	O	1	S	O	2	T	O	4	X02
	7	P	O	O	7	60000	P	S	O	1	S	O	2	T	O	4	X02
	8	P	O	O	8	60000	P	S	O	1	S	O	2	T	O	4	X02
	9	P	O	O	9	60000	P	S	O	1	S	O	2	T	O	4	X02
1	0	P	O	1	0	60000	P	S	O	1	S	O	2	T	O	4	X02
1	1	P	O	1	1	60000	P	S	O	1	S	O	2	T	O	4	X02
1	2	P	O	1	2	60000	P	S	O	1	S	O	2	T	O	4	X02
1	3	P	O	1	3	60000	P	S	O	1	S	O	2	T	O	4	X02
1	4	P	O	1	4	60000	P	S	O	1	S	O	2	T	O	4	X02
1	5	P	O	1	5	60000	P	S	O	1	S	O	2	T	O	4	X02
1	6	P	O	1	6	60000	P	S	O	1	S	O	2	T	O	4	X02
1	7	P	O	1	7	60000	P	S	O	1	S	O	2	T	O	4	X02
1	8	P	O	1	8	60000	P	S	O	1	S	O	2	T	O	4	X02
1	9	P	O	2	0	60000	P	S	O	1	S	O	2	T	O	4	X02
2	0	P	O	2	1	60000	P	S	O	1	S	O	2	T	O	4	X02
2	1	P	O	2	2	60000	P	S	O	1	S	O	2	T	O	4	X02
2	2	P	O	2	3	60000	P	S	O	1	S	O	2	T	O	4	X02
2	3	P	O	2	4	60000	P	S	O	1	S	O	2	T	O	4	X02
2	4	P	O	2	6	60000	P	S	O	1	S	O	2	T	O	4	X02
2	5	P	O	2	7	60000	P	S	O	1	S	O	2	T	O	4	X02
2	6	P	O	2	8	60000	P	S	O	1	S	O	2	T	O	4	X02
2	7	P	O	2	9	60000	P	S	O	1	S	O	2	T	O	4	X02
2	8	P	O	3	0	60000	P	S	O	1	S	O	2	T	O	4	X02
2	9	P	O	3	1	60000	P	S	O	1	S	O	2	T	O	4	X02
3	0	P	O	3	3	60000	P	S	O	1	S	O	2	T	O	4	X02
3	1	P	O	3	4	60000	P	S	O	1	S	O	2	T	O	4	X02
3	2	P	O	3	6	60000	P	S	O	1	S	O	2	T	O	4	X02

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Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSA No. 0248-EPA-OT

EPA I.D. Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

K S D 0 0 7 2 4 6 8 4 6

XIV. Description of Hazardous Wastes

Line Number	A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES										
	(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))										
	1	P	O	3	8	60000	P	S	O	1	S	O	2	T	O	4	X02
	2	P	O	3	9	60000	P	S	O	1	S	O	2	T	O	4	X02
	3	P	O	4	0	60000	P	S	O	1	S	O	2	T	O	4	X02
	4	P	O	4	1	60000	P	S	O	1	S	O	2	T	O	4	X02
	5	P	O	4	2	60000	P	S	O	1	S	O	2	T	O	4	X02
	6	P	O	4	3	60000	P	S	O	1	S	O	2	T	O	4	X02
	7	P	O	4	4	60000	P	S	O	1	S	O	2	T	O	4	X02
	8	P	O	4	5	60000	P	S	O	1	S	O	2	T	O	4	X02
	9	P	O	4	6	60000	P	S	O	1	S	O	2	T	O	4	X02
1	0	P	O	4	7	60000	P	S	O	1	S	O	2	T	O	4	X02
1	1	P	O	4	8	60000	P	S	O	1	S	O	2	T	O	4	X02
1	2	P	O	4	9	60000	P	S	O	1	S	O	2	T	O	4	X02
1	3	P	O	5	0	60000	P	S	O	1	S	O	2	T	O	4	X02
1	4	P	O	5	1	60000	P	S	O	1	S	O	2	T	O	4	X02
1	5	P	O	5	4	60000	P	S	O	1	S	O	2	T	O	4	X02
1	6	P	O	5	6	60000	P	S	O	1	S	O	2	T	O	4	X02
1	7	P	O	5	7	60000	P	S	O	1	S	O	2	T	O	4	X02
1	8	P	O	5	8	60000	P	S	O	1	S	O	2	T	O	4	X02
1	9	P	O	5	9	60000	P	S	O	1	S	O	2	T	O	4	X02
2	0	P	O	6	0	60000	P	S	O	1	S	O	2	T	O	4	X02
2	1	P	O	6	2	60000	P	S	O	1	S	O	2	T	O	4	X02
2	2	P	O	6	3	60000	P	S	O	1	S	O	2	T	O	4	X02
2	3	P	O	6	4	60000	P	S	O	1	S	O	2	T	O	4	X02
2	4	P	O	6	5	60000	P	S	O	1	S	O	2	T	O	4	X02
2	5	P	O	6	6	60000	P	S	O	1	S	O	2	T	O	4	X02
2	6	P	O	6	7	60000	P	S	O	1	S	O	2	T	O	4	X02
2	7	P	O	6	8	60000	P	S	O	1	S	O	2	T	O	4	X02
2	8	P	O	6	9	60000	P	S	O	1	S	O	2	T	O	4	X02
9		P	O	7	0	60000	P	S	O	1	S	O	2	T	O	4	X02
3	0	P	O	7	1	60000	P	S	O	1	S	O	2	T	O	4	X02
3	1	P	O	7	2	60000	P	S	O	1	S	O	2	T	O	4	X02
3	2	P	O	7	3	60000	P	S	O	1	S	O	2	T	O	4	X02
3	3	P	O	7	4	60000	P	S	O	1	S	O	2	T	O	4	X02

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Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSANo. 0248-EPA-OT

EPA I.D. Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

K S D 0 0 7 2 4 6 8 4 6

XIV. Description of Hazardous Wastes

Line Number	A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES										
	(1) PROCESS CODES (Enter code)										(2) PROCESS DESCRIPTION (If a code is not entered in D(1))						
	1	P	O	7	5	60000	P	S	O	1	S	O	2	T	O	4	X02
	2	P	O	7	6	60000	P	S	O	1	S	O	2	T	O	4	X02
	3	P	O	7	7	60000	P	S	O	1	S	O	2	T	O	4	X02
	4	P	O	7	8	60000	P	S	O	1	S	O	2	T	O	4	X02
	5	P	O	8	1	60000	P	S	O	1	S	O	2	T	O	4	X02
	6	P	O	8	2	60000	P	S	O	1	S	O	2	T	O	4	X02
	7	P	O	8	4	60000	P	S	O	1	S	O	2	T	O	4	X02
	8	P	O	8	5	60000	P	S	O	1	S	O	2	T	O	4	X02
	9	P	O	8	7	60000	P	S	O	1	S	O	2	T	O	4	X02
1	0	P	O	8	8	60000	P	S	O	1	S	O	2	T	O	4	X02
1	1	P	O	8	9	60000	P	S	O	1	S	O	2	T	O	4	X02
1	2	P	O	9	2	60000	P	S	O	1	S	O	2	T	O	4	X02
1	3	P	O	9	3	60000	P	S	O	1	S	O	2	T	O	4	X02
1	4	P	O	9	4	60000	P	S	O	1	S	O	2	T	O	4	X02
1	5	P	O	9	5	60000	P	S	O	1	S	O	2	T	O	4	X02
1	6	P	O	9	6	60000	P	S	O	1	S	O	2	T	O	4	X02
1	7	P	O	9	7	60000	P	S	O	1	S	O	2	T	O	4	X02
1	8	P	O	9	8	60000	P	S	O	1	S	O	2	T	O	4	X02
1	9	P	O	9	9	60000	P	S	O	1	S	O	2	T	O	4	X02
2	0	P	1	0	1	60000	P	S	O	1	S	O	2	T	O	4	X02
2	1	P	1	0	2	60000	P	S	O	1	S	O	2	T	O	4	X02
2	2	P	1	0	3	60000	P	S	O	1	S	O	2	T	O	4	X02
2	3	P	1	0	4	60000	P	S	O	1	S	O	2	T	O	4	X02
2	4	P	1	0	5	60000	P	S	O	1	S	O	2	T	O	4	X02
2	5	P	1	0	6	60000	P	S	O	1	S	O	2	T	O	4	X02
2	6	P	1	0	8	60000	P	S	O	1	S	O	2	T	O	4	X02
2	7	P	1	0	9	60000	P	S	O	1	S	O	2	T	O	4	X02
2	8	P	1	1	0	60000	P	S	O	1	S	O	2	T	O	4	X02
2	9	P	1	1	1	60000	P	S	O	1	S	O	2	T	O	4	X02
3	0	P	1	1	2	60000	P	S	O	1	S	O	2	T	O	4	X02
3	1	P	1	1	3	60000	P	S	O	1	S	O	2	T	O	4	X02
3	2	P	1	1	4	60000	P	S	O	1	S	O	2	T	O	4	X02
3	3	P	1	1	5	60000	P	S	O	1	S	O	2	T	O	4	X02

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GSA No. 0248-EPA-OT

Secondary ID Number (Enter from page 1)

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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	52
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[illegible]

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSA No. 0248-EPA-OT

EPA ID Number (Enter from page 1)												Secondary ID Number (Enter from page 1)											
X	S	D	0	0	7	2	4	6	8	4	6												

XIV: Description of Hazardous Wastes

Line Number		A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES											
		(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))											
	1	U	O	O	1	60000	P	S	O	1	S	O	2	T	O	4	X02		
	2	U	O	O	2	60000	P	S	O	1	S	O	2	T	O	4	X02		
	3	U	O	O	3	60000	P	S	O	1	S	O	2	T	O	4	X02		
	4	U	O	O	4	60000	P	S	O	1	S	O	2	T	O	4	X02		
	5	U	O	O	5	60000	P	S	O	1	S	O	2	T	O	4	X02		
	6	U	O	O	6	60000	P	S	O	1	S	O	2	T	O	4	X02		
	7	U	O	O	7	60000	P	S	O	1	S	O	2	T	O	4	X02		
	8	U	O	O	8	60000	P	S	O	1	S	O	2	T	O	4	X02		
	9	U	O	O	9	60000	P	S	O	1	S	O	2	T	O	4	X02		
1	0	U	O	1	0	60000	P	S	O	1	S	O	2	T	O	4	X02		
1	1	U	O	1	1	60000	P	S	O	1	S	O	2	T	O	4	X02		
1	2	U	O	1	2	60000	P	S	O	1	S	O	2	T	O	4	X02		
	3	U	O	1	4	60000	P	S	O	1	S	O	2	T	O	4	X02		
1	4	U	O	1	5	60000	P	S	O	1	S	O	2	T	O	4	X02		
1	5	U	O	1	6	60000	P	S	O	1	S	O	2	T	O	4	X02		
1	6	U	O	1	7	60000	P	S	O	1	S	O	2	T	O	4	X02		
1	7	U	O	1	8	60000	P	S	O	1	S	O	2	T	O	4	X02		
1	8	U	O	1	9	60000	P	S	O	1	S	O	2	T	O	4	X02		
1	9	U	O	2	0	60000	P	S	O	1	S	O	2	T	O	4	X02		
2	0	U	O	2	1	60000	P	S	O	1	S	O	2	T	O	4	X02		
2	1	U	O	2	2	60000	P	S	O	1	S	O	2	T	O	4	X02		
2	2	U	O	2	3	60000	P	S	O	1	S	O	2	T	O	4	X02		
2	3	U	O	2	4	60000	P	S	O	1	S	O	2	T	O	4	X02		
2	4	U	O	2	5	60000	P	S	O	1	S	O	2	T	O	4	X02		
2	5	U	O	2	6	60000	P	S	O	1	S	O	2	T	O	4	X02		
2	6	U	O	2	7	60000	P	S	O	1	S	O	2	T	O	4	X02		
2	7	U	O	2	8	60000	P	S	O	1	S	O	2	T	O	4	X02		
2	8	U	O	2	9	60000	P	S	O	1	S	O	2	T	O	4	X02		
	9	U	O	3	0	60000	P	S	O	1	S	O	2	T	O	4	X02		
3	0	U	O	3	1	60000	P	S	O	1	S	O	2	T	O	4	X02		
3	1	U	O	3	2	60000	P	S	O	1	S	O	2	T	O	4	X02		
3	2	U	O	3	3	60000	P	S	O	1	S	O	2	T	O	4	X02		
3	3	U	O	3	4	60000	P	S	O	1	S	O	2	T	O	4	X02		

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSA No. 0248-EPA-OT

EPA ID Number (Enter from page 1)												Secondary ID Number (Enter from page 1)											
K	S	D	0	0	7	2	4	6	8	4	6												

XIV. Description of Hazardous Wastes

Line Number	A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES											
							(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))					
	1	U	O	3	5	60000	P	S	O	1	S	O	2	T	O	4	X02	
	2	U	O	3	6	60000	P	S	O	1	S	O	2	T	O	4	X02	
	3	U	O	3	7	60000	P	S	O	1	S	O	2	T	O	4	X02	
	4	U	O	3	8	60000	P	S	O	1	S	O	2	T	O	4	X02	
	5	U	O	3	9	60000	P	S	O	1	S	O	2	T	O	4	X02	
	6	U	O	4	1	60000	P	S	O	1	S	O	2	T	O	4	X02	
	7	U	O	4	2	60000	P	S	O	1	S	O	2	T	O	4	X02	
	8	U	O	4	3	60000	P	S	O	1	S	O	2	T	O	4	X02	
	9	U	O	4	4	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	0	U	O	4	5	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	1	U	O	4	6	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	2	U	O	4	7	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	3	U	O	4	8	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	4	U	O	4	9	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	5	U	O	5	0	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	6	U	O	5	1	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	7	U	O	5	2	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	8	U	O	5	3	60000	P	S	O	1	S	O	2	T	O	4	X02	
1	9	U	O	5	4	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	0	U	O	5	6	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	1	U	O	5	7	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	2	U	O	5	8	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	3	U	O	5	9	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	4	U	O	6	0	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	5	U	O	6	1	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	6	U	O	6	2	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	7	U	O	6	3	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	8	U	O	6	4	60000	P	S	O	1	S	O	2	T	O	4	X02	
2	9	U	O	6	6	60000	P	S	O	1	S	O	2	T	O	4	X02	
3	0	U	O	6	7	60000	P	S	O	1	S	O	2	T	O	4	X02	
3	1	U	O	6	8	60000	P	S	O	1	S	O	2	T	O	4	X02	
3	2	U	O	6	9	60000	P	S	O	1	S	O	2	T	O	4	X02	
3	3	U	O	7	0	60000	P	S	O	1	S	O	2	T	O	4	X02	

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Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSA No. 0248-EPA-OT

EPA I.D. Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

K S D 0 0 7 2 4 6 8 4 6

XIV. Description of Hazardous Wastes

Line Number		A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES									
		(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))									
	1	U	O	7	1	60000	P	S	O	1	S	O	2	T	O	4	X02
	2	U	O	7	2	60000	P	S	O	1	S	O	2	T	O	4	X02
	3	U	O	7	3	60000	P	S	O	1	S	O	2	T	O	4	X02
	4	U	O	7	4	60000	P	S	O	1	S	O	2	T	O	4	X02
	5	U	O	7	5	60000	P	S	O	1	S	O	2	T	O	4	X02
	6	U	O	7	6	60000	P	S	O	1	S	O	2	T	O	4	X02
	7	U	O	7	7	60000	P	S	O	1	S	O	2	T	O	4	X02
	8	U	O	7	8	60000	P	S	O	1	S	O	2	T	O	4	X02
	9	U	O	7	9	60000	P	S	O	1	S	O	2	T	O	4	X02
1	0	U	O	8	0	60000	P	S	O	1	S	O	2	T	O	4	X02
1	1	U	O	8	1	60000	P	S	O	1	S	O	2	T	O	4	X02
1	2	U	O	8	2	60000	P	S	O	1	S	O	2	T	O	4	X02
	3	U	O	8	3	60000	P	S	O	1	S	O	2	T	O	4	X02
1	4	U	O	8	4	60000	P	S	O	1	S	O	2	T	O	4	X02
1	5	U	O	8	5	60000	P	S	O	1	S	O	2	T	O	4	X02
1	6	U	O	8	6	60000	P	S	O	1	S	O	2	T	O	4	X02
1	7	U	O	8	7	60000	P	S	O	1	S	O	2	T	O	4	X02
1	8	U	O	8	8	60000	P	S	O	1	S	O	2	T	O	4	X02
1	9	U	O	8	9	60000	P	S	O	1	S	O	2	T	O	4	X02
2	0	U	O	9	0	60000	P	S	O	1	S	O	2	T	O	4	X02
2	1	U	O	9	1	60000	P	S	O	1	S	O	2	T	O	4	X02
2	2	U	O	9	2	60000	P	S	O	1	S	O	2	T	O	4	X02
2	3	U	O	9	3	60000	P	S	O	1	S	O	2	T	O	4	X02
2	4	U	O	9	4	60000	P	S	O	1	S	O	2	T	O	4	X02
2	5	U	O	9	5	60000	P	S	O	1	S	O	2	T	O	4	X02
2	6	U	O	9	6	60000	P	S	O	1	S	O	2	T	O	4	X02
2	7	U	O	9	7	60000	P	S	O	1	S	O	2	T	O	4	X02
2	8	U	O	9	8	60000	P	S	O	1	S	O	2	T	O	4	X02
	9	U	O	9	9	60000	P	S	O	1	S	O	2	T	O	4	X02
3	0	U	1	0	1	60000	P	S	O	1	S	O	2	T	O	4	X02
3	1	U	1	0	2	60000	P	S	O	1	S	O	2	T	O	4	X02
3	2	U	1	0	3	60000	P	S	O	1	S	O	2	T	O	4	X02
3	3	U	1	0	5	60000	P	S	O	1	S	O	2	T	O	4	X02

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Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSA No. 0248-EPA-OT

EPA ID Number (Enter from page 1)												Secondary ID Number (Enter from page 1)											
K	S	D	0	0	7	2	4	6	8	4	6												

XIV. Description of Hazardous Wastes

Line Number	A. EPA HAZARDOUS WASTE NO (Enter code)					B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES											
	(1) PROCESS CODES (Enter code)							(2) PROCESS DESCRIPTION (If a code is not entered in D(1))											
1	U	1	0	6		60000	P	S	O	1	S	O	2	T	O	4	X02		
2	U	1	0	7		60000	P	S	O	1	S	O	2	T	O	4	X02		
3	U	1	0	8		60000	P	S	O	1	S	O	2	T	O	4	X02		
4	U	1	0	9		60000	p	S	O	1	S	O	2	T	O	4	X02		
5	U	1	1	0		60000	P	S	O	1	S	O	2	T	O	4	X02		
6	U	1	1	1		60000	P	S	O	1	S	O	2	T	O	4	X02		
7	U	1	1	2		60000	P	S	O	1	S	O	2	T	O	4	X02		
8	U	1	1	3		60000	P	S	O	1	S	O	2	T	O	4	x02		
9	U	1	1	4		60000	P	S	O	1	S	O	2	T	O	4	X02		
10	U	1	1	5		60000	P	S	O	1	S	O	2	T	O	4	X02		
11	U	1	1	6		60000	P	S	O	1	S	O	2	T	O	4	X02		
12	U	1	1	7		60000	P	S	O	1	S	O	2	T	O	4	X02		
13	U	1	1	8		60000	P	S	O	1	S	O	2	T	O	4	X02		
14	U	1	1	9		60000	P	S	O	1	S	O	2	T	O	4	X02		
15	U	1	2	0		60000	P	S	O	1	S	O	2	T	O	4	X02		
16	U	1	2	1		60000	P	S	O	1	S	O	2	T	O	4	X02		
17	U	1	2	2		60000	P	S	O	1	S	O	2	T	O	4	X02		
18	U	1	2	3		60000	P	S	O	1	S	O	2	T	O	4	X02		
19	U	1	2	4		60000	P	S	O	1	S	O	2	T	O	4	X02		
20	U	1	2	5		60000	P	S	O	1	S	O	2	T	O	4	X02		
21	U	1	2	6		60000	P	S	O	1	S	O	2	T	O	4	X02		
22	U	1	2	7		60000	P	S	O	1	S	O	2	T	O	4	X02		
23	U	1	2	8		60000	P	S	O	1	S	O	2	T	O	4	X02		
24	U	1	2	9		60000	P	S	O	1	S	O	2	T	O	4	X02		
25	U	1	3	0		60000	P	S	O	1	S	O	2	T	O	4	X02		
26	U	1	3	1		60000	P	S	O	1	S	O	2	T	O	4	X02		
27	U	1	3	2		60000	P	S	O	1	S	O	2	T	O	4	X02		
28	U	1	3	3		60000	P	S	O	1	S	O	2	T	O	4	X02		
29	U	1	3	4		60000	P	S	O	1	S	O	2	T	O	4	X02		
30	U	1	3	5		60000	P	S	O	1	S	O	2	T	O	4	X02		
31	U	1	3	6		60000	P	S	O	1	S	O	2	T	O	4	X02		
32	U	1	3	7		60000	P	S	O	1	S	O	2	T	O	4	X02		
33	U	1	3	8		60000	P	S	O	1	S	O	2	T	O	4	X02		

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Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSANo. 0248-EPA-OT

EPA I.D. Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

K S D 0 0 7 2 4 6 8 4 6

XIV. Description of Hazardous Wastes

Line Number	A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES									
	(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))									
1	U	1	4	0	60000	P	S	O	1	S	O	2	T	O	4	X02
2	U	1	4	1	60000	P	S	O	1	S	O	2	T	O	4	X02
3	U	1	4	2	60000	P	S	O	1	S	O	2	T	O	4	X02
4	U	1	4	3	60000	P	S	O	1	S	O	2	T	O	4	X02
5	U	1	4	4	60000	P	S	O	1	S	O	2	T	O	4	X02
6	U	1	4	5	60000	P	S	O	1	S	O	2	T	O	4	X02
7	U	1	4	6	60000	P	S	O	1	S	O	2	T	O	4	X02
8	U	1	4	7	60000	P	S	O	1	S	O	2	T	O	4	X02
9	U	1	4	8	60000	P	S	O	1	S	O	2	T	O	4	X02
10	U	1	4	9	60000	P	S	O	1	S	O	2	T	O	4	X02
11	U	1	5	0	60000	P	S	O	1	S	O	2	T	O	4	X02
12	U	1	5	1	60000	P	S	O	1	S	O	2	T	O	4	X02
13	U	1	5	2	60000	P	S	O	1	S	O	2	T	O	4	X02
14	U	1	5	3	60000	P	S	O	1	S	O	2	T	O	4	X02
15	U	1	5	4	60000	P	S	O	1	S	O	2	T	O	4	X02
16	U	1	5	5	60000	P	S	O	1	S	O	2	T	O	4	X02
17	U	1	5	6	60000	P	S	O	1	S	O	2	T	O	4	X02
18	U	1	5	7	60000	P	S	O	1	S	O	2	T	O	4	X02
19	U	1	5	8	60000	P	S	O	1	S	O	2	T	O	4	X02
20	U	1	5	9	60000	P	S	O	1	S	O	2	T	O	4	X02
21	U	1	6	0	60000	P	S	O	1	S	O	2	T	O	4	X02
22	U	1	6	1	60000	P	S	O	1	S	O	2	T	O	4	X02
23	U	1	6	2	60000	P	S	O	1	S	O	2	T	O	4	X02
24	U	1	6	3	60000	P	S	O	1	S	O	2	T	O	4	X02
25	U	1	6	4	60000	P	S	O	1	S	O	2	T	O	4	X02
26	U	1	6	5	60000	P	S	O	1	S	O	2	T	O	4	X02
27	U	1	6	6	60000	P	S	O	1	S	O	2	T	O	4	X02
28	U	1	6	7	60000	P	S	O	1	S	O	2	T	O	4	X02
29	U	1	6	8	60000	P	S	O	1	S	O	2	T	O	4	X02
30	U	1	6	9	60000	P	S	O	1	S	O	2	T	O	4	X02
31	U	1	7	0	60000	P	S	O	1	S	O	2	T	O	4	X02
32	U	1	7	1	60000	P	S	O	1	S	O	2	T	O	4	X02
33	U	1	7	2	60000	P	S	O	1	S	O	2	T	O	4	X02

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EPA I.D. Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

K S D 0 0 7 2 4 6 8 4 6

XIV. Description of Hazardous Wastes

Line Number		A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES									
		(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))									
	1	U	1	7	3	60000	P	S	O	1	S	O	2	T	O	4	X02
	2	U	1	7	4	60000	P	S	O	1	S	O	2	T	O	4	X02
	3	U	1	7	6	60000	P	S	O	1	S	O	2	T	O	4	X02
	4	U	1	7	7	60000	P	S	O	1	S	O	2	T	O	4	X02
	5	U	1	7	8	60000	P	S	O	1	S	O	2	T	O	4	X02
	6	U	1	7	9	60000	P	S	O	1	S	O	2	T	O	4	X02
	7	U	1	8	0	60000	P	S	O	1	S	O	2	T	O	4	X02
	8	U	1	8	1	60000	P	S	O	1	S	O	2	T	O	4	X02
	9	U	1	8	2	60000	P	S	O	1	S	O	2	T	O	4	X02
1	0	U	1	8	3	60000	P	S	O	1	S	O	2	T	O	4	X02
1	1	U	1	8	4	60000	P	S	O	1	S	O	2	T	O	4	X02
1	2	U	1	8	5	60000	P	S	O	1	S	O	2	T	O	4	X02
1	3	U	1	8	6	60000	P	S	O	1	S	O	2	T	O	4	X02
1	4	U	1	8	7	60000	P	S	O	1	S	O	2	T	O	4	X02
1	5	U	1	8	8	60000	P	S	O	1	S	O	2	T	O	4	X02
1	6	U	1	8	9	60000	P	S	O	1	S	O	2	T	O	4	X02
1	7	U	1	9	0	60000	P	S	O	1	S	O	2	T	O	4	X02
1	8	U	1	9	1	60000	P	S	O	1	S	O	2	T	O	4	X02
1	9	U	1	9	2	60000	P	S	O	1	S	O	2	T	O	4	X02
2	0	U	1	9	3	60000	P	S	O	1	S	O	2	T	O	4	X02
2	1	U	1	9	4	60000	P	S	O	1	S	O	2	T	O	4	X02
2	2	U	1	9	6	60000	P	S	O	1	S	O	2	T	O	4	X02
2	3	U	1	9	7	60000	P	S	O	1	S	O	2	T	O	4	X02
2	4	U	2	0	0	60000	P	S	O	1	S	O	2	T	O	4	X02
2	5	U	2	0	1	60000	P	S	O	1	S	O	2	T	O	4	X02
2	6	U	2	0	2	60000	P	S	O	1	S	O	2	T	O	4	X02
2	7	U	2	0	3	60000	P	S	O	1	S	O	2	T	O	4	X02
2	8	U	2	0	4	60000	P	S	O	1	S	O	2	T	O	4	X02
2	9	U	2	0	5	60000	P	S	O	1	S	O	2	T	O	4	X02
3	0	U	2	0	6	60000	P	S	O	1	S	O	2	T	O	4	X02
3	1	U	2	0	7	60000	P	S	O	1	S	O	2	T	O	4	X02
3	2	U	2	0	8	60000	P	S	O	1	S	O	2	T	O	4	X02
3	3	U	2	0	9	60000	P	S	O	1	S	O	2	T	O	4	X02

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Form Approved, OMB No. 2050-0034 Expires 9-30-96
GS No. 0248-EPA-OT

EPA ID Number (Enter from page 1)

Secondary ID Number (Enter from page 1)

K S D 0 0 7 2 4 6 8 4 6

XIV Description of Hazardous Wastes

Line Number	A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES									
	(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))									
1	U	2	1	0	60000	P	S	O	1	S	O	2	T	O	4	X02
2	U	2	1	1	60000	P	S	O	1	S	O	2	T	O	4	X02
3	U	2	1	3	60000	P	S	O	1	S	O	2	T	O	4	X02
4	U	2	1	4	60000	P	S	O	1	S	O	2	T	O	4	X02
5	U	2	1	5	60000	P	S	O	1	S	O	2	T	O	4	X02
6	U	2	1	6	60000	P	S	O	1	S	O	2	T	O	4	X02
7	U	2	1	7	60000	P	S	O	1	S	O	2	T	O	4	X02
8	U	2	1	8	60000	P	S	O	1	S	O	2	T	O	4	X02
9	U	2	1	9	60000	P	S	O	1	S	O	2	T	O	4	X02
10	U	2	2	0	60000	P	S	O	1	S	O	2	T	O	4	X02
11	U	2	2	1	60000	P	S	O	1	S	O	2	T	O	4	X02
12	U	2	2	2	60000	P	S	O	1	S	O	2	T	O	4	X02
13	U	2	2	3	60000	P	S	O	1	S	O	2	T	O	4	X02
14	U	2	2	5	60000	P	S	O	1	S	O	2	T	O	4	X02
15	U	2	2	6	60000	P	S	O	1	S	O	2	T	O	4	X02
16	U	2	2	7	60000	P	S	O	1	S	O	2	T	O	4	X02
17	U	2	2	8	60000	P	S	O	1	S	O	2	T	O	4	X02
18	U	2	3	4	60000	P	S	O	1	S	O	2	T	O	4	X02
19	U	2	3	5	60000	P	S	O	1	S	O	2	T	O	4	X02
20	U	2	3	6	60000	P	S	O	1	S	O	2	T	O	4	X02
21	U	2	3	7	60000	P	S	O	1	S	O	2	T	O	4	X02
22	U	2	3	8	60000	P	S	O	1	S	O	2	T	O	4	X02
23	U	2	3	9	60000	P	S	O	1	S	O	2	T	O	4	X02
24	U	2	4	0	60000	P	S	O	1	S	O	2	T	O	4	X02
25	U	2	4	3	60000	P	S	O	1	S	O	2	T	O	4	X02
26	U	2	4	4	60000	P	S	O	1	S	O	2	T	O	4	X02
27	U	2	4	6	60000	P	S	O	1	S	O	2	T	O	4	X02
28	U	2	4	7	60000	P	S	O	1	S	O	2	T	O	4	X02
29	U	2	4	8	60000	P	S	O	1	S	O	2	T	O	4	X02
30	U	2	4	9	60000	P	S	O	1	S	O	2	T	O	4	X02
31	U	2	7	1	60000	P	S	O	1	S	O	2	T	O	4	X02
32	U	2	7	7	60000	P	S	O	1	S	O	2	T	O	4	X02
33	U	2	7	8	60000	P	S	O	1	S	O	2	T	O	4	X02

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EPA ID Number (Enter from page 1)												Secondary ID Number (Enter from page 1)											
K	S	D	0	0	7	2	4	6	8	4	6												

XIV-Description of Hazardous Wastes

Line Number		A. EPA HAZARDOUS WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES											
		(1) PROCESS CODES (Enter code)								(2) PROCESS DESCRIPTION (If a code is not entered in D(1))									
	1	U	2	7	9	60000	P	S	0	1	S	0	2	T	0	4	X02		
	2	U	2	8	0	60000	P	S	0	1	S	0	2	T	0	4	X02		
	3	U	3	2	8	60000	P	S	0	1	S	0	2	T	0	4	X02		
	4	U	3	5	3	60000	P	S	0	1	S	0	2	T	0	4	X02		
	5	U	3	5	9	60000	P	S	0	1	S	0	2	T	0	4	X02		
	6	U	3	6	4	60000	P	S	0	1	S	0	2	T	0	4	X02		
	7	U	3	6	5	60000	P	S	0	1	S	0	2	T	0	4	X02		
	8	U	3	6	6	60000	P	S	0	1	S	0	2	T	0	4	X02		
	9	U	3	6	7	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	0	U	3	7	2	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	1	U	3	7	3	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	2	U	3	7	5	60000	P	S	0	1	S	0	2	T	0	4	X02		
	3	U	3	7	6	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	4	U	3	7	7	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	5	U	3	7	8	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	6	U	3	7	9	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	7	U	3	8	1	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	8	U	3	8	2	60000	P	S	0	1	S	0	2	T	0	4	X02		
1	9	U	3	8	3	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	0	U	3	8	4	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	1	U	3	8	5	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	2	U	3	8	6	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	3	U	3	8	7	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	4	U	3	8	9	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	5	U	3	9	0	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	6	U	3	9	1	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	7	U	3	9	2	60000	P	S	0	1	S	0	2	T	0	4	X02		
2	8	U	3	9	3	60000	P	S	0	1	S	0	2	T	0	4	X02		
	9	U	3	9	4	60000	P	S	0	1	S	0	2	T	0	4	X02		
3	0	U	3	9	5	60000	P	S	0	1	S	0	2	T	0	4	X02		
3	1	U	3	9	6	60000	P	S	0	1	S	0	2	T	0	4	X02		
3	2	J	4	0	0	60000	P	S	0	1	S	0	2	T	0	4	X02		
3	3	U	4	0	1	60000	P	S	0	1	S	0	2	T	0	4	X02		

Secondary ID Number: (Enter from page 1)

[illegible][illegible]

8. Process Codes and Design Capacities

Line Number	A. Process Code	B. Process Design Capacity		C. Process Total Number of Units	For Official Use
		1. Amount	2. Unit		
01	S01	46640	G	001	
02	S01	9900	G	001	
03	S01	99110	G	001	
04	S01	14960	G	001	
05	S01	55000	G	001	
06	S01	50600	G	001	
07	S01	49280	G	001	
15	S02	7363	G	001	
16	S02	7084	G	001	
17	S02	7363	G	001	
18	S02	7363	G	001	
19	S02	20895	G	001	
20	S02	20895	G	001	
21	S02	7363	G	001	
22	S02	7363	G	001	
23	S02	5078	G	001	
24	S02	5078	G	001	
25	S02	5078	G	001	
26	S02	5078	G	001	
27	S02	5078	G	001	
28	S02	5078	G	001	
29	S02	2659	G	001	
30	S02	2659	G	001	
31	S02	2659	G	001	
32	S02	2659	G	001	

8. Process Codes and Design Capacities

Line Number	A. Process Code	B. Process Design Capacity		C. Process Total Number of Units	For Official Use
		1. Amount	2. Unit		
33	S02	9028	G	001	
34	S02	522	G	001	
36	S02	1155	G	001	
37	T01	7363	G	001	
38	T01	7084	G	001	
39	T01	7363	G	001	
40	T01	7363	G	001	
41	T01	20895	G	001	
42	T01	20895	G	001	
43	T01	7363	G	001	
44	T01	7363	G	001	
45	T01	5078	G	001	
46	T01	5078	G	001	
47	T01	5078	G	001	
48	T01	5078	G	001	
49	T01	5078	G	001	
50	T01	5078	G	001	
51	T01	2659	G	001	
52	T01	2659	G	001	
53	T01	2659	G	001	
54	T01	2659	G	001	
55	T01	9028	G	001	
56	T01	522	G	001	
57	T01	1155	G	001	
58	X02	20000	U	001	

8. Process Codes and Design Capacities

Line Number	A. Process Code	B. Process Design Capacity		C. Process Total Number of Units	For Official Use
		1. Amount	2. Unit		
61	X02	10000	U	001	
62	X02	20000	U	001	
63	X03	14400	U	001	

9. Other Processes

Line Number	A. Process Code	B. Process Design Capacity		C. Process Total of Units	D. Description of Process
		1. Amount	2. Unit		
08	T04	8	N	001	Treatment in containers and container management activities as described in Addendum A are conducted.
09	T04	76	N	001	Treatment in containers and container management activities as described in Addendum A are conducted.
10	T04	11	N	001	Treatment in containers and container management activities as described in Addendum A are conducted.
11	T04	42	N	001	Treatment in containers and container management activities as described in Addendum A are conducted.
12	T04	39	N	001	Treatment in containers and container management activities as described in Addendum A are conducted.
13	T04	38	N	001	Treatment in containers and container management activities as described in Addendum A are conducted.
14	T04	36	N	001	Treatment in containers and container management activities as described in Addendum A are conducted.

10. Description of Hazardous Wastes (See instructions on page 37)

- A. EPA HAZARDOUS WASTE NUMBER** - Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR Part 261, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.
- B. ESTIMATED ANNUAL QUANTITY** - For each listed waste entered in column A, estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A, estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.
- C. UNIT OF MEASURE** - For each quantity entered in column B, enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure, taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES**1. PROCESS CODES:**

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate the waste will be stored, treated, and/or disposed at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Items 8A and 9A on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

- Enter the first two as described above.
- Enter "000" in the extreme right box of Item 10.D(1).
- Use additional sheet, enter line number from previous sheet, and enter additional code(s) in Item 10.E.

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in Item 10.D(2) or in Item 10.E(2).

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

- Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
- In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
- Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING Item 10 (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operations. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an Incinerator and disposal will be in a landfill.

Line Number	A. EPA Hazardous Waste No. (Enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES									
	(1) PROCESS CODES (Enter code)						(2) PROCESS DESCRIPTION (If a code is not entered in D(1))									
X 1	K	0	5	4	900	P	T	0	3	D	8	0				
X 2	D	0	0	2	400	P	T	0	3	D	8	0				
X 3	D	0	0	1	100	P	T	0	3	D	8	0				
X 4	D	0	0	2												Included With Above

11. Map (See instructions on page 38)

Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

12. Facility Drawing (See instructions on page 39)

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

13. Photographs (See instructions on page 39)

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

14. Comments (See instructions on page 39)

Drawings, diagrams, figures and maps may contain previous names of the facility. These include:
Hydrocarbon Recyclers, Inc. of Wichita
Laidlaw Environmental Services (Wichita), Inc. and
Safety-Kleen (Wichita), Inc.

Item 12 Facility Layout

A scale drawing (Figure A.1) of the facility is shown.

Storage and treatment operations and waste management activities are shown on the drawings of the individual buildings (figures A.2 to A.8) showing the areas proposed for the storage or treatment processes or for the proposed process equipment. Each operation or process is located in the facility as described below, and as indicated on the drawings by their respective item and line numbers.

BUILDING D (Figure A.2)

- | | |
|--------|---|
| XII 01 | Refers to S01 container storage indicated by Item XII, Line 01. This symbol occurs in each room where container storage is proposed. Total container storage capacity in Building D is 46,640 gallons or 848 x 55 gallon drum equivalents. Waste materials stored in containers in Building D are ignitable, non-ignitable, or a combination of both. |
| XII 23 | Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 16, and described in Addendum B. Tank V-9 is in the northwest room, marked Area D400. Total design capacity for this tank is 5,078 gallons. Materials stored in this vessel are non-ignitable, regulated and non regulated, liquids. |
| XII 24 | Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 17, and described in Addendum B. Tank V-10 is in the northwest room, marked Area D400. Total design capacity for this tank is 5,078 gallons. Materials stored in this vessel are non-ignitable, regulated and non regulated, liquids. |
| XII 25 | Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 18, and described in Addendum B. Tank V-11 is in the northwest room, marked Area D400. Total design capacity for this tank is 5,078 gallons. Materials stored in this vessel are non-ignitable, regulated and non regulated, liquids. |
| XII 26 | Refers to S02 hazardous waste tank storage service, indicated by |

Item XII, Line 17, and described in Addendum B. Tank V-12 is in the northwest room, marked Area D400. Total design capacity for this tank is 5,078 gallons. Materials stored in this vessel are non-ignitable, regulated and non regulated, liquids.

- XII 27 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 20, and described in Addendum B. Tank V-13 is in the northwest room, marked Area D400. Total design capacity for this tank is 5,078 gallons. Materials stored in this vessel are non-ignitable, regulated and non regulated, liquids.
- XII 28 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 21, and described in Addendum B. Tank V-14 is in the northwest room, marked Area D400. Total design capacity for this tank is 5,078 gallons. Materials stored in this vessel are non-ignitable, regulated and non regulated, liquids.
- XII 29 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 22, and described in Addendum B. Tank V-15A is in the northwest room, marked Area D400. Total design capacity for this tank is 2,659 gallons. Materials stored in this vessel are non-ignitable, regulated and non regulated, liquids.
- XII 30 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 23, and described in Addendum B. Tank V-15B is in the northwest room, marked Area D400. Total design capacity for this tank is 2,659 gallons. Materials stored in this vessel are non-ignitable, regulated and non regulated, liquids.
- XII 31 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 24, and described in Addendum B. Tank V-15C is in the northwest room, marked Area D400. Total design capacity for this tank is 2,659 gallons. Materials stored in this vessel are non-ignitable, regulated and non regulated, liquids.
- XII 32 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 25, and described in Addendum B. Tank V-15D is in the northwest room, marked Area D400. Total design capacity for this tank is 2,659 gallons. Materials stored in this vessel are non-ignitable, regulated and non regulated, liquids.
- XII 33 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 26, and described in Addendum B. Tank V-16 is in the northwest room, marked Area D400. Total design capacity

for this tank is 9,048 gallons. Materials stored in this vessel are non-ignitable, regulated and non regulated, liquids.

- XIII 08 Refers to T04 treatment in containers and container management activities as described in Addendum A. This symbol occurs in each room where this process is proposed.
- XII 45 Refers to T01 treatment in tanks and tank management activities, indicated by Item XII, Line 38, and described in Addendum A. Tank V-9 is in the northwest room, marked Area D400. Total design capacity for this tank is 5,078 gallons.
- XII 46 Refers to T01 treatment in tanks and tank management activities, indicated by Item XII, Line 39, and described in Addendum A. Tank V-10 is in the northwest room, marked Area D400. Total design capacity for this tank is 5,078 gallons.
- XII 47 Refers to T01 treatment in tanks and tank management activities, indicated by Item XII, Line 40, and described in Addendum A. Tank V-11 is in the northwest room, marked Area D400. Total design capacity for this tank is 5,078 gallons.
- XII 48 Refers to T01 treatment in tanks and tank management activities, indicated by Item XII, Line 41, and described in Addendum A. Tank V-12 is in the northwest room, marked Area D400. Total design capacity for this tank is 5,078 gallons.
- XII 49 Refers to T01 treatment in tanks and tank management activities, indicated by Item XII, Line 42, and described in Addendum A. Tank V-13 is in the northwest room, marked Area D400. Total design capacity for this tank is 5,078 gallons.
- XII 50 Refers to T01 treatment in tanks and tank management activities, indicated by Item XII, Line 43, and described in Addendum B. Tank V-14 is in the northwest room, marked Area D400. Total design capacity for this tank is 5,078 gallons.
- XII 51 Refers to T01 treatment in tanks and tank management activities, indicated by Item XII, Line 44, and described in Addendum A. Tank V-15A is in the northwest room, marked Area D400. Total design capacity for this tank is 2,659 gallons.
- XII 52 Refers to T01 treatment in tanks and tank management activities, indicated by Item XII, Line 45, and described in Addendum A.

Tank V-15B is in the northwest room, marked Area D400. Total design capacity for this tank is 2,659 gallons.

- XII 53 Refers to T01 treatment in tanks and tank management activities, indicated by Item XII, Line 46, and described in Addendum A. Tank V-15C is in the northwest room, marked Area D400. Total design capacity for this tank is 2,659 gallons.
- XII 54 Refers to T01 treatment in tanks and tank management activities, indicated by Item XII, Line 47, and described in Addendum A. Tank V-15D is in the northwest room, marked Area D400. Total design capacity for this tank is 2,659 gallons.
- XII 55 Refers to T01 treatment in tanks and tank management activities, indicated by Item XII, Line 48 and described in Addendum A. Tank V-16 is in the northwest room, marked Area D400. Total design capacity for this tank is 9,028 gallons.

Processing Area (Figure A.3)

- XII 02 Refers to S01 container storage indicated by Item XII, Line 02. This symbol occurs in each area where container storage is proposed. Total container storage capacity in the Processing Area is 9,900 gallons or 180 x 55 gallon drum equivalents. Waste materials stored in containers in the Processing area include liquids which will be pumped to bulk storage and solids which will be handled in the Drum Processing area.
- XII 15 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 08, and described in Addendum B. Total design capacity for tank V-01 is 7,363 gallons. Materials stored in this vessel are ignitable and non-ignitable, regulated and non regulated, liquids.
- XII 16 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 09, and described in Addendum B. Total design capacity for tank V-02 is 7,084 gallons. Materials stored in this vessel are ignitable and non-ignitable, regulated and non regulated, liquids.
- XII 17 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 10, and described in Addendum B. Total design capacity for tank V-03 is 5,078 gallons. Materials stored in this vessel are ignitable and non-ignitable, regulated and non regulated, liquids.
- XII 18 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 11, and described in Addendum B. Total design capacity for tank V-04 is 7,084 gallons. Materials stored in this vessel are ignitable and non-ignitable, regulated and non regulated, liquids.
- XII 19 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 12, and described in Addendum B. Total design capacity for tank V-05 is 20,895 gallons. Materials stored in this vessel are ignitable and non-ignitable, regulated and non regulated, liquids.
- XII 20 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 13, and described in Addendum B. Total design capacity for tank V-06 is 20,895 gallons. Materials stored in this

vessel are ignitable and non-ignitable, regulated and non regulated, liquids.

- XII 21 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 14, and described in Addendum B. Total design capacity for tank V-07 is 7,363 gallons. Materials stored in this vessel are ignitable and non-ignitable, regulated and non regulated, liquids.
- XII 22 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 15, and described in Addendum B. Total design capacity for tank V-08 is 7,363 gallons. Materials stored in this vessel are ignitable and non-ignitable, regulated and non regulated, liquids.
- XII 34 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 27, and described in Addendum B. Total design capacity for tank V-17 is 522 gallons. Materials stored in this vessel are ignitable and non-ignitable, regulated and non regulated, liquids.
- XII 36 Refers to S02 hazardous waste tank storage service, indicated by Item XII, Line 29, and described in Addendum B. Total design capacity for tank V-26 is 1,155 gallons. Materials stored in this vessel are ignitable and non-ignitable, regulated and non regulated, liquids. This tank is also the Dispersing Unit, a miscellaneous unit (Subpart X) listed in item XIII, Line 55.
- XIII 09 Refers to T04 treatment in containers and container management activities as described in Addendum A. This symbol occurs in each area where this process is proposed.
- XII 37 Refers to T01 treatment in tanks and tank management activities in Tank V-01, indicated by Item XII, Line 30, and described in Addendum A.
- XII 38 Refers to T01 treatment in tanks and tank management activities in Tank V-02, indicated by Item XII, Line 31, and described in Addendum A.
- XII 39 Refers to T01 treatment in tanks and tank management activities in Tank V-03, indicated by Item XII, Line 32, and described in Addendum A.

- XII 40 Refers to T01 treatment in tanks and tank management activities in Tank V-04, indicated by Item XII, Line 33, and described in Addendum A.
- XII 41 Refers to T01 treatment in tanks and tank management activities in Tank V-05, indicated by Item XII, Line 34, and described in Addendum A.
- XII 42 Refers to T01 treatment in tanks and tank management activities in Tank V-06, indicated by Item XII, Line 35, and described in Addendum A.
- XII 43 Refers to T01 treatment in tanks and tank management activities in Tank V-07, indicated by Item XII, Line 36, and described in Addendum A.
- XII 44 Refers to T01 treatment in tanks and tank management activities in Tank V-08, indicated by Item XII, Line 37, and described in Addendum A.
- XII 56 Refers to T01 treatment in tanks and tank management activities in Tank V-17, indicated by Item XII, Line 49, and described in Addendum A.
- XII 57 Refers to T01 treatment in tanks and tank management activities in Tank V-26, indicated by Item XII, Line 50, and described in Addendum A. This tank is also the Dispersing Unit, a miscellaneous unit (Subpart X) listed in item XIII, Line 55.
- XII 58 Refers to X02 miscellaneous (Subpart X) mechanical processing in the Drum Scraper Unit indicated by Item XII, Line 51. The Drum Scraper Unit is in the north area, marked area P200.
- XII 61 Refers to X02 miscellaneous (Subpart X) mechanical processing in the Drum Washing Unit indicated by Item XII, Line 54. The Drum Washing Unit is in the north area, marked area P200.
- XII 62 Refers to X02 miscellaneous (Subpart X) mechanical processing in the Dispersing Unit indicated by Item XII, Line 55. The Disperser is in the north area, marked area P200.

BUILDING C

(Figure A.4)

XII 03 Refers to S01 container storage indicated by Item XII, Line 03. This symbol occurs in each area where container storage is proposed. Total container storage capacity in Building C is 99,110 gallons or 1802 x 55 gallon drum equivalents. Waste materials stored in containers in Building C include ignitable and non-ignitable regulated and non-regulated wastes.

XIII 10 Refers to T04 treatment in containers and container management activities as described in Addendum A. This symbol occurs in each area where this process is proposed.

LOADING DOCK

(Figure A.5)

XII 04 Refers to S01 container storage indicated by Item XII, Line 04. This symbol occurs in each area where container storage is proposed. Total container storage capacity in The Loading Dock is 14,960 gallons or 272 x 55 gallon drum equivalents. Newly received containerized materials are stored on the Loading Dock.

XIII 11 Refers to T04 treatment in containers and container management activities as described in Addendum A. This symbol occurs in each area where this process is proposed.

BUILDING B

(Figure A.6)

XII 05 Refers to S01 container storage indicated by Item XII, Line 05. This symbol occurs in each area where container storage is proposed. Total container storage capacity in Building B is 55,000 gallons or 1000 x 55 gallon drum equivalents. Materials stored in Building B include corrosives and other non-ignitable materials.

XIII 12 Refers to T04 treatment in containers and container management activities as described in Addendum A. This symbol occurs in each area where this process is proposed.

BUILDING I

(Figure A.7)

- XII 06 Refers to S01 container storage indicated by Item XII, Line 06. This symbol occurs in each area where container storage is proposed. Total container storage capacity in Building I is 50,600 gallons or 920 x 55 gallon drum equivalents. Materials stored in Building I include any permitted ignitable or non-ignitable materials.
- XIII 13 Refers to T04 treatment in containers and container management activities as described in Addendum A. This symbol occurs in each area where this process is proposed.

BUILDING J

(Figure A.8)

- XII 07 Refers to S01 container storage indicated by Item XII, Line 07. This symbol occurs in each area where container storage is proposed. Total container storage capacity in Building J is 49,280 gallons or 896 x 55 gallon drum equivalents. Materials stored in Building j include any permitted ignitable or non-ignitable materials.
- XIII 14 Refers to T04 treatment in containers and container management activities as described in Addendum A. This symbol occurs in each area where this process is proposed.

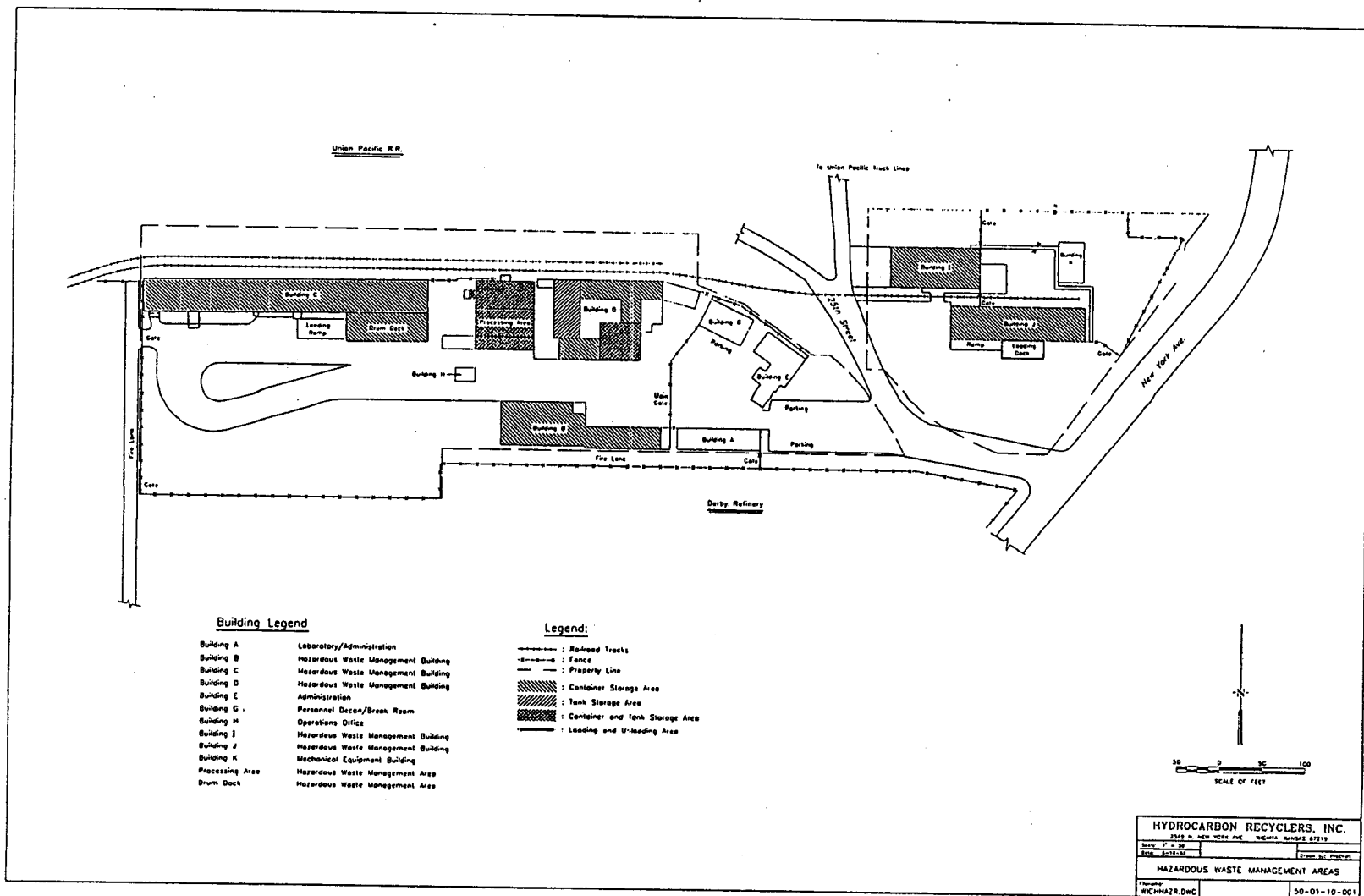


Figure A.1

Legend

Part A Item and Line Number	Process Code	Tank or Unit Number
XII 23	S02	V-9
XII 24	S02	V-10
XII 25	S02	V-11
XII 26	S02	V-12
XII 27	S02	V-13
XII 28	S02	V-14
XII 29	S02	V-15A
XII 30	S02	V-15B
XII 31	S02	V-15C
XII 32	S02	V-15D
XII 45	T01	V-9
XII 46	T01	V-10
XII 47	T01	V-11
XII 48	T01	V-12
XII 49	T01	V-13
XII 50	T01	V-14
XII 51	T01	V-15A
XII 52	T01	V-15B
XII 53	T01	V-15C
XII 54	T01	V-15D
XII 55	T01	V-16

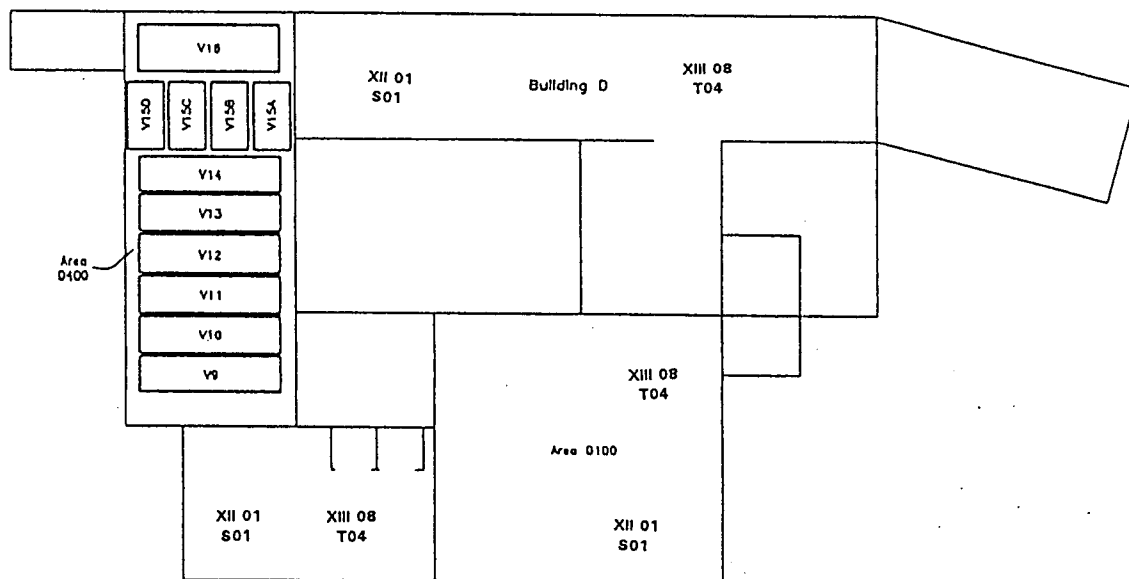


Figure A.2

Legend

Part A Item and Line Number	Process Code	Tank or Unit Number
XII 15	S02	V-01
XII 16	S02	V-02
XII 17	S02	V-03
XII 18	S02	V-04
XII 19	S02	V-05
XII 20	S02	V-06
XII 21	S02	V-07
XII 22	S02	V-08
XII 34	S02	V-17
XII 36	S02	V-26
XII 37	T01	V-01
XII 38	T01	V-02
XII 39	T01	V-03
XII 40	T01	V-04
XII 41	T01	V-05
XII 42	T01	V-06
XII 43	T01	V-07
XII 44	T01	V-08
XII 56	T01	V-17
XII 57	T01	V-26
XII 58	X02	V35
XII 61	X02	V34
XII 62	X02	V-26

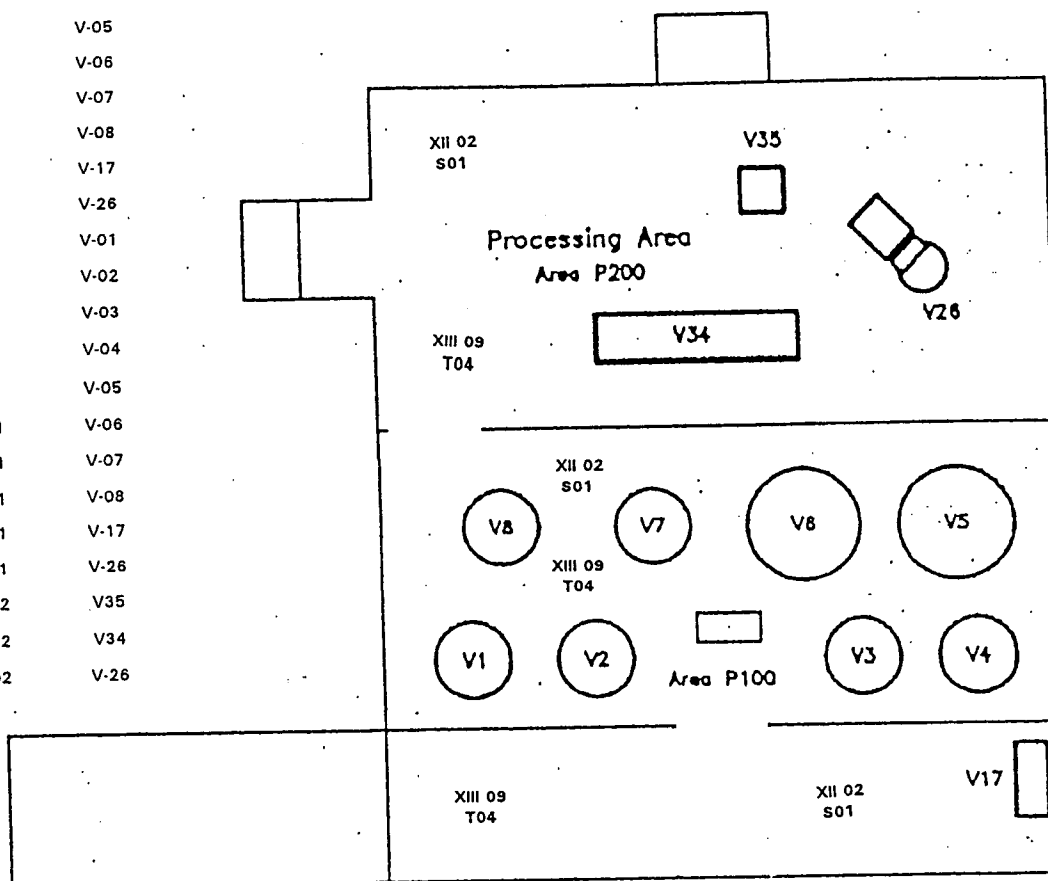


Figure A.3

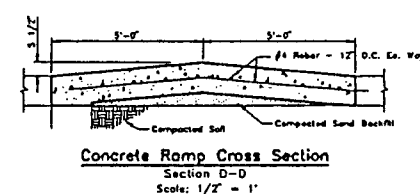
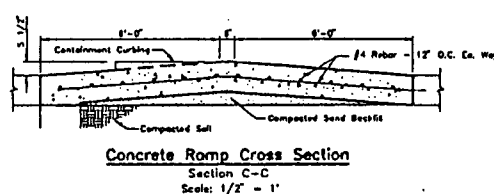
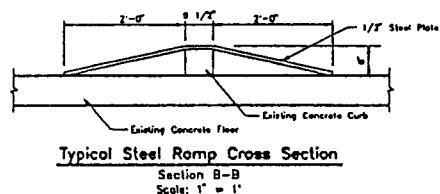
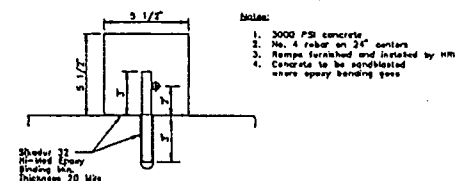
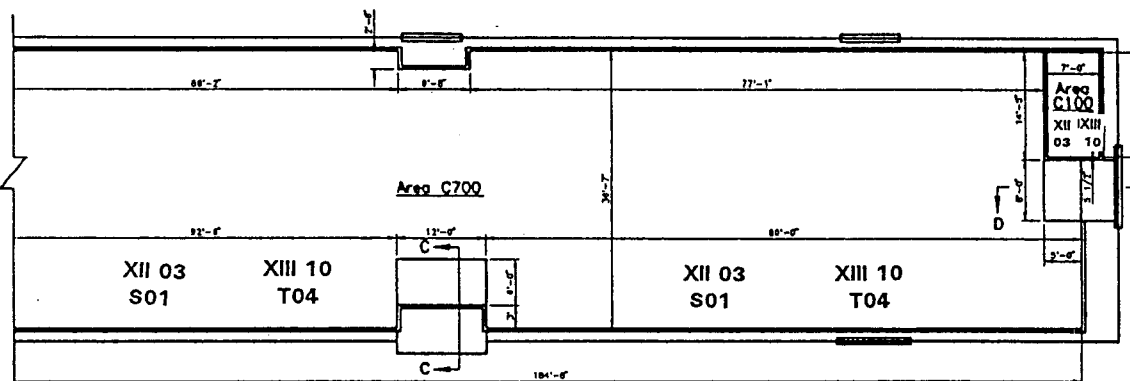
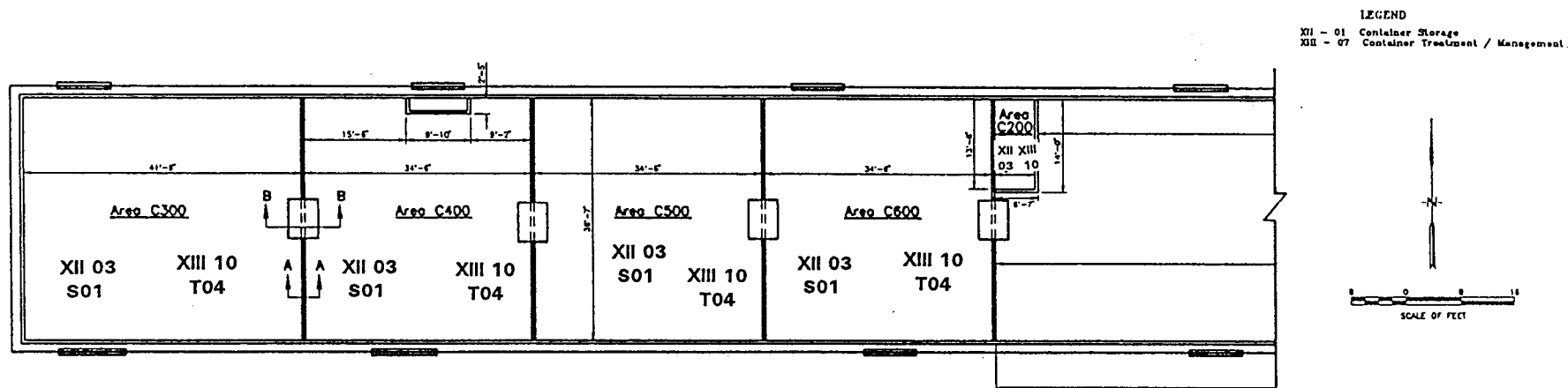


FIGURE A.4

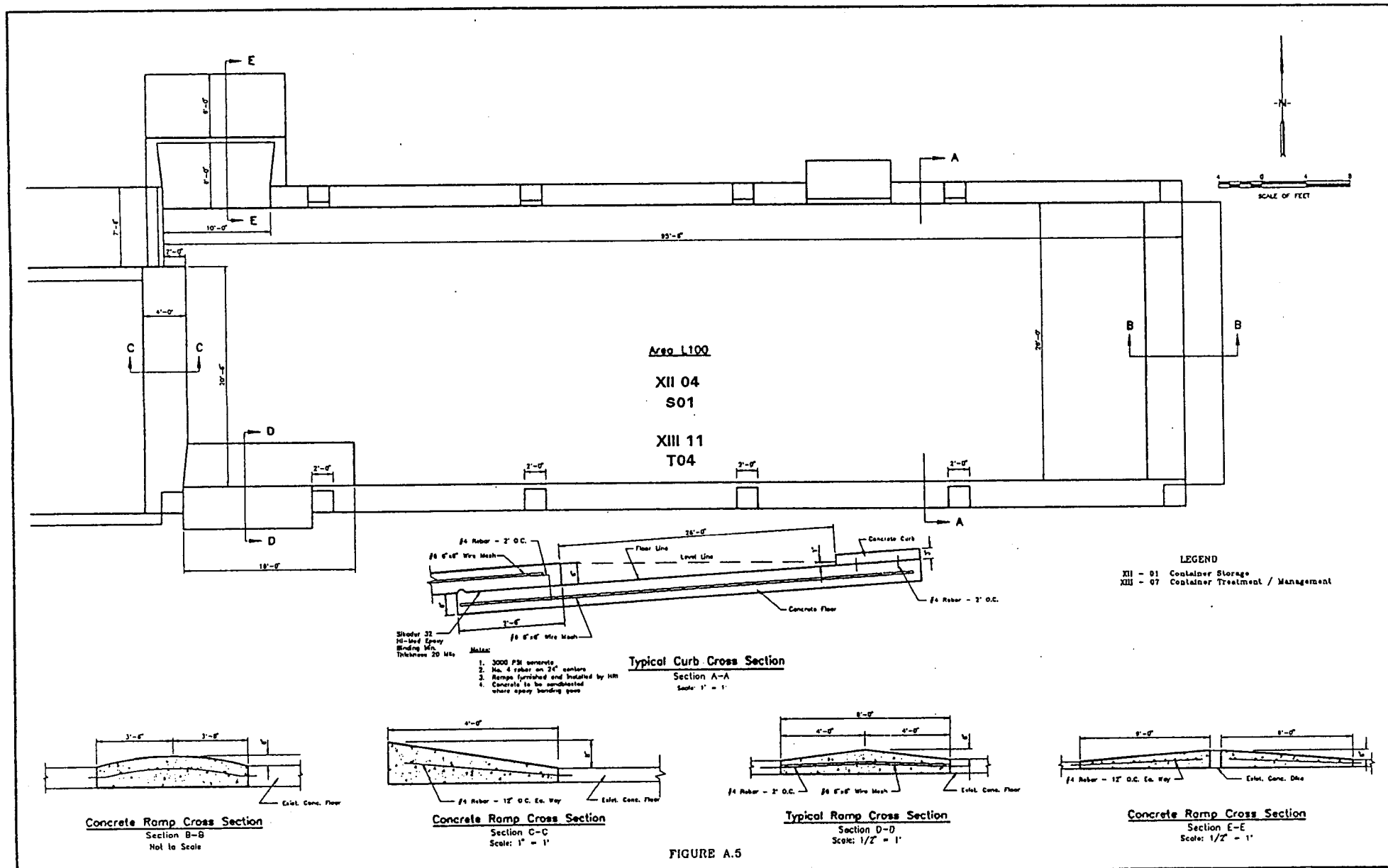
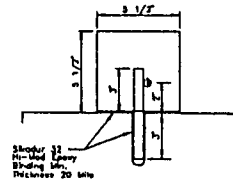
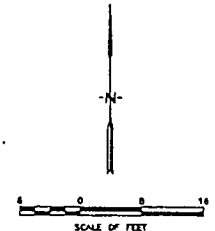


FIGURE A.5

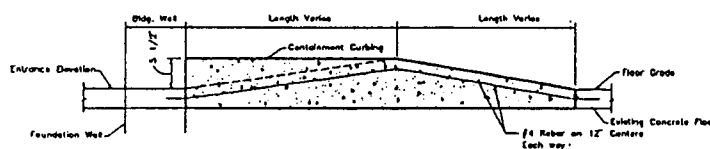
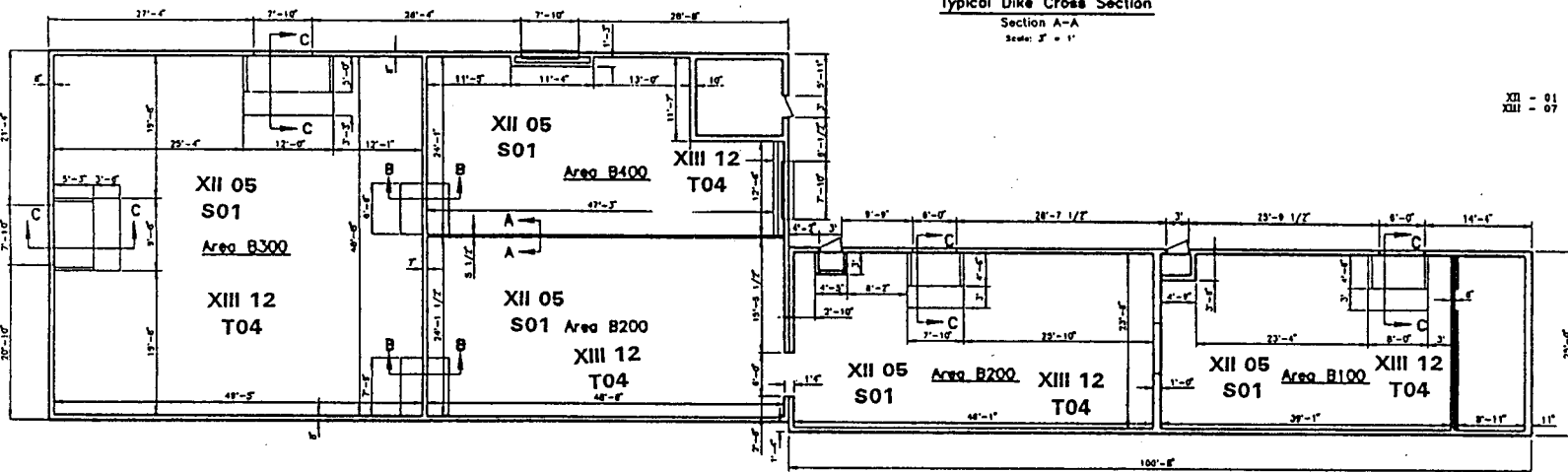


Typical Dike Cross Section
Section A-A
Scale: 1" = 1'

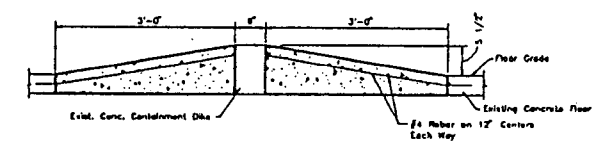
- Notes:
1. 3000 PSI concrete
 2. No. 4 rebar on 24" centers
 3. Ramps Curbed and Isolated by 18" thick concrete
 4. Concrete to be sandblasted where epoxy bonding goes



- LEGEND
- XII - 01 Container Storage
 - XIII - 07 Container Treatment / Management

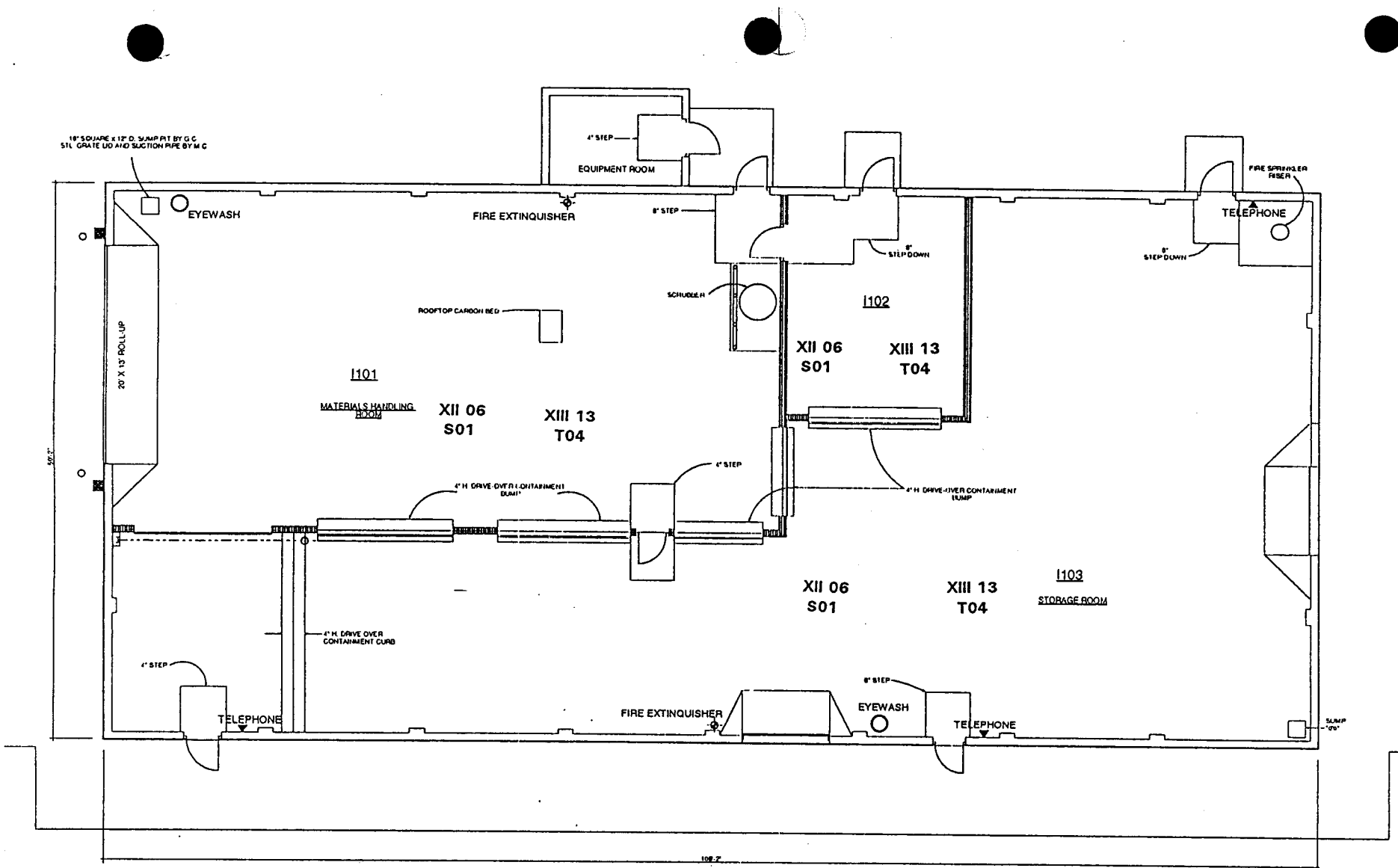


Concrete Ramp Cross Section
Section C-C
Scale: 1" = 1'



Concrete Ramp Cross Section
Section B-B
Scale: 1" = 1'

FIGURE A.6



CONTAINMENT QUANTITIES

I101 = 4,631 gallons
 I102 = 651 gallons
 I103 = 6,180 gallons

FIRE SUPPRESSION SYSTEMS

I101 = DELUGE SYSTEM ACTIVATED BY EXPLOSION PROOF HEAT DETECTORS
 I102 = DRY CHEMICAL SYSTEMS ACTIVATED BY HEAT DETECTORS
 I103 = DELUGE SYSTEM ACTIVATED BY HEAT DETECTORS AND UV - FLAME DETECTORS

I - Building
 a plan for SAFETY EQUIPMENT to the
Hydrocarbon Recyclers, Inc.
 a Division of USPCI
 located at
 2549 N. New York Ave.
 Wichita, KS 67219

Figure A.7

Clean Harbors Kansas, LLC
RCRA Permit Application
Section B
Facility Description

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Figure B.5, Annual Surface Wind Rose

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Drawings Located in Section Y, Drawings

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Drawing 50-01-11-001, Facility Map
Drawing 50-01-01-002, Facility Layout
Drawing 50-01-10-001, Hazardous Waste Management Areas
Drawing 50-00-01-001, Annual Surface Wind Rose

Acronym Table

Clean Harbors Kansas, LLC (CHK)
United States Environmental Protection Agency (USEPA)
Resource Conservation and Recovery Act (RCRA)
Kansas Administrative Regulations (KAR)
Code of Federal Regulations (CFR)
Mean Sea Level (MSL)
National Oceanic and Atmospheric Administration (NOAA)
Average Daily Traffic (ADT)

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**Clean Harbors Kansas, LLC
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Section B
Facility Description**

B-1 Introduction:

The Clean Harbors Kansas, LLC facility is located in Wichita, Kansas. The facility stores, treats, and recovers for recycling hazardous and nonhazardous wastes. Clean Harbors Kansas, LLC blends materials containing heating value for beneficial use and energy recovery as hazardous waste fuel (e.g., cement kiln fuel) and recovers solvents for further management. Clean Harbors Kansas, LLC also stores, processes, and otherwise manages waste solvents, sludges, solids, and water for subsequent shipment to other United States Environmental Protection Agency (USEPA) permitted (or interim status) facilities for distillation, beneficial reuse, or disposal. Clean Harbors Kansas, LLC also stores waste solvent, hydrocarbons, paint-related waste streams, solids, corrosive waste streams, and water-based waste streams. Hazardous waste management at the facility includes, but is not limited to, fuel blending for energy recovery, other physical treatment (including shredding and granulating) for waste minimization or to render the waste more amenable for subsequent management, accumulation of materials for reclamation, accumulation for hazardous waste landfill disposal, accumulation of low BTU liquids for deepwell injection, repackaging for incineration, processing for solvent and carbon recovery, and storage of industrial waste waters for subsequent discharge. Storage and treatment occurs in both containers and tanks.

The facility operates under the requirements of the Resource Conservation and Recovery Act

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RCRA Permit Application
Section B
Facility Description

(RCRA) and the Kansas Hazardous Waste Management Act as set forth in Kansas Administrative Regulations (KAR), Title 28, Article 31. The KAR incorporate, with few additions, the RCRA regulations contained in 40 CFR 260 through 270. Therefore, this section will refer only to the federal regulations.

This section discusses facility location, location information, facility layout, traffic information, and general facility process unit description as required by the Code of Federal Regulations (CFR); i.e., 40 CFR 270.14(b)(1), (10), (11) and (19). A map showing topographic detail as required by 40 CFR 270.14(b)(19) is also presented in this section.

A topographic map showing well locations required under 40 CFR 270.14(c)(3) is included in Section A, Part A Permit Application and this section. More specific information on the facility design and operation is presented in subsequent application sections C through N.

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**Clean Harbors Kansas, LLC
RCRA Permit Application
Section B
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B-2 Facility Location:

Figure B.1, Site Location Map (Drawing 50-01-01-001, Site Location Map) shows the location of the facility; the facility is located at 2549 North New York Avenue in Wichita, Kansas. This address is in the Northeast quarter of the Southeast quarter of Section 4, Township 27 South, Range 1 East. The facility is located in Sedgwick County (Sedgwick County population 403,662, 1990 census). The facility is located in an industrial area of Wichita; the population of Wichita was approximately 283,496 (estimated) as of 7/1/84 (Population for Kansas Counties and Incorporated Places¹).

The facility and the surrounding area are shown on Figure B.2, Facility Map (Drawing 50-01-11-001, Facility Map); facility information is superimposed on a topographic base map with contour intervals of two (2) feet as required by 40 CFR 270.14(b)(19). The map/drawing is based on a topographic map generated in January of 1992 and includes areas within 1,000 feet of the facility. The facility is located approximately at north latitude 37°43'50" and west longitude 97°19'08". The area that includes the process plant area and hazardous waste storage areas for tanks and containers make up the active portion of the facility. The facility boundary, a distance of 1000 feet around the facility boundary and the active portion of the facility are shown on Figure B.2 (Drawing 50-01-11-001).

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Privately owned land abuts the facility on three sides: Union Pacific Railroad and Overnite Transportation own property to the north; the remains of Derby Refinery are located south of the facility; and land owned by Derby refinery adjoins the site to the west. New York Avenue is located to the east of the facility.

The administration and hazardous waste management areas as well as general facility layout, access control, and sewer lines are shown on Figure B.3, Facility Layout (Drawing 50-01-01-002, Facility Layout). The hazardous waste storage buildings and associated loading areas are shown on Figure B.4, Hazardous Waste Management Areas (Drawing 50-01-10-001, Hazardous Waste Management Areas). The drawings generally show access roads and internal roadways, administration and process plant buildings, and hazardous waste management locations. The storage of ignitable and reactive wastes on-site is in compliance with the equipment buffer zone requirements as set forth in 40 CFR 264.176, and 264.198(b). Specifics regarding container management and tank systems are presented in Sections D, E, and M (Use and Management of Containers, Tank Systems and Other Regulated Units).

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Figure B.1. Site Location Map

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Figure B.2. Facility Map

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Figure B.3. Facility Layout

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Figure B.4. Hazardous Waste Management Areas

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B-3 Location Information:

B-3a Physiography, Geology and Land Use:

Sedgwick County is situated in the Arkansas River Lowlands section of the Central Lowlands physiographic province². The facility is located in an area of very low topographic relief; elevation on site is about 1315 feet above MSL. The extreme flatness of the broad Arkansas River valley and gently rolling slopes provide the low relief of the vicinity.

In summary, the soil is developed on recent and old alluvial sediments of the Elandco and Tabler formations³. These sandy and clayey alluvial deposits are underlain by Wellington shale. Approximately 10 feet of alluvial clay with fine sand overlies approximately 30 feet of alluvial sand. Ground water source in the area is from permeable sands in the alluvial deposits; this ground water aquifer has transmissivities up to 250,000 gallons per day per foot.

The water table in the vicinity, as reported in the Draft Remedial Investigation Report of the 29th and Mead RI/FS (August 1991), is approximately 1293 feet above Mean Sea Level (MSL)⁴.

The surrounding land is generally used for industrial purposes: land use to the south and west

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is by Derby Refinery, to the north by Union Pacific Railroad and Overnite Transportation, with highway I-135 to the east.

Past land use of the facility property has included light to medium industrial activities since approximately 1940. The majority of precipitation occurs during the period between April and September. The average precipitation is thirty (30) inches per year; the average seasonal snowfall is fifteen (15) inches. The heaviest one day rainfall for Wichita during the period of record from 1951 to 1980 was 5.03 inches (October, 1985). The 25-year, 24-hour precipitation event is 6.2 inches as determined from "Technical Paper No. 40, Rainfall Frequency Atlas of the United States" (US Dept. of Commerce)⁵.

B-3b Climate:

Wichita, Kansas is located in the Central Great Plains where a wide variety of weather conditions may occur year round. Mixing of warm, moist, Gulf coast air masses with cold, dry Arctic air masses can result in severe storms and rapid changes in weather conditions. Climatological information is based on National Oceanic and Atmospheric Administration (NOAA) data.

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Temperature extremes from minus 21 degrees to more than 110 degrees Fahrenheit have been recorded in Wichita; however, temperatures below zero occur much less frequently than temperatures above 90 degrees Fahrenheit. The average relative humidity ranges from 55 percent in the afternoon to 80 percent at dawn. The average daily maximum temperature in summer is ninety-one degrees (91°F). The highest recorded temperature was 113°F (July 1954). The average daily minimum temperature in winter is twenty-three degrees (23°F). The lowest temperature on record was minus twenty-one degrees (-21°F) in February of 1982⁶.

Prevailing winds are from the south; the most severe thunderstorms occur mainly during the spring and early summer. The highest, one-minute observed wind speed recorded was forty-eight (48) mph⁵. Figure B.5, Annual Surface Wind Rose (Drawing 50-00-01-001, Annual Surface Wind Rose) shows the prevailing wind direction and speed measured in Wichita, Kansas from 1951 to 1960.

B-3c Surface Water Drainage:

Surface water drainage is in two directions; most surface water on the site drains to the east branch of Chisholm Creek located east of the facility, although some surface water drains to the southwest into Chisholm Creek. The east branch joins Chisholm Creek south of the facility and Chisholm Creek discharges into the Arkansas River approximately 6 miles south of

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the facility. Surface water flow is shown on Figure B.2, Facility Map (Drawing 50-01-11-001).

B-3d Floodplain: 40 CFR 270.14(b)(11)(iii)

A Flood Hazard Boundary Map prepared by the US Department of Housing and Urban Development, Federal Insurance Administration, for Sedgwick County, Kansas was reviewed pursuant to 40 CFR 270.14(b)(11)(iii). The Special Flood Hazard Area (100-year floodplain) within 1000 feet of the facility boundary is shown on Figure B.2, Facility Map (Drawing 50-01-11-001). The facility boundary is not within the 100 year floodplain. Therefore, the requirements of 40 CFR 264.18(b) are not applicable.

B-3e Seismicity: 40 CFR 270.14(b)(11)(i)and(ii)

The CHK facility is located in Sedgwick County, Kansas. No areas in Kansas are listed in Appendix VI of 40 CFR, Part 264, as needing seismic consideration. The facility is not located in a seismic hazard zone, therefore, the requirements of 40 CFR 264.18(a) are not applicable.

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Figure B.5. Annual Surface Wind Rose

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B-4 Traffic Information: 40 CFR 270.14(b)(10)

B-4a Off-site Traffic:

Shipments of materials will be by truck or rail. It is expected that most truck shipments will access the facility from interstate highway I-135 using 21st Street North and New York Avenue. To handle rail shipments, a Union Pacific railroad siding is located along the north side of the facility. Figure B.1, Site Location Map (Drawing 50-01-01-001), shows these access routes.

Highway I-135 is a divided, six-lane, two-way, concrete interstate highway. The Average Daily Traffic (ADT) recorded by the Transportation Planning Division of the Kansas State Highway Department (KSHD) for this stretch of I-135 in 1990 was 50,973 vehicles south of the 21st Street interchange and 43,950 vehicles north of the interchange. Twenty-first (21st) Street is generally a four-lane, two-way thoroughfare; however, the roadway is split into a two-lane, one-way pair at the intersection with New York Avenue. The ADT recorded in 1990 on 21st Street to the west of the I-135 interchange was 14,924 vehicles. New York Avenue is a low volume, industrial roadway consisting of two-lane, two-way traffic; no ADT is recorded.

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Truck traffic into the facility may average up to approximately twenty (20) shipments of hazardous waste per day. Typical trucks accessing the facility will be tractor trailer rigs and straight trucks. The overall level of service on local streets and highways is not anticipated to be affected by facility traffic. Railcar traffic into the facility is expected to average up to two railcars per week.

The facility is located in an industrial area of Wichita. The existing local streets and highways currently accommodate heavy vehicles carrying the maximum legal load.

B-4b On-site Traffic and Load-Bearing Capacity:

Enclosed tractor trailers, tanker trucks, dump trucks, dump trailers, or intermodal transport container trailers, etc., may be used to transport materials to, from, and within the facility. The roadway foundation is adequate to accommodate traffic consisting of truck and trailer combination vehicles. No bridges exist on-site.

The most active areas on-site are surfaced to minimize the generation of dust and reduce maintenance requirements. Where surfaced, roadways are composed of six inch, reinforced concrete construction with stabilized sub-soil. All other traffic areas are provided with surface gravel and are maintained as needed.

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Vehicular traffic into the plant is controlled through gate entrances. The active portion of the facility is divided by a public right-of-way. On-site traffic, between the main portion of the facility and Buildings I and J, includes crossing the public right-of-way at a ninety degree angle. On-site traffic routing, alignment of facility roadways, and internal traffic patterns are shown on Figure B.3, Facility Layout (Drawing 50-01-01-002). Loading and unloading areas are shown on Figure B.4, Hazardous Waste Management Areas (Drawing 50-01-10-001).

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B-5 Facility Security: 264.14 and 122.25(a)(4)

The facility security system is discussed in detail in Section G, Procedures to Prevent Hazards.

Where required for security, the CHK facility is surrounded by a six foot chain link fence with gates (see Figure B.3, Facility Layout and Drawing 50-01-01-002). Personnel and vehicle access is controlled by an electronic system which is designed to prevent the unknowing entry, and minimize the unauthorized entry, of persons or livestock onto active portions of the facility. This system may be shut down for maintenance operations at which time security will be provided by facility personnel or locked gates. Note that fencing is not provided where buildings and building entrances provide a barrier to unauthorized entry. To meet the security requirements of 40 CFR 264.14 in areas without fencing or building walls/doors, 24 hour surveillance will be provided when required. In addition, employees are instructed to question and direct unauthorized visitors to the office should they try to enter the active portion of the facility.

Warning signs as required by 40 CFR 264.14 have been placed at each entrance and along the barrier to unauthorized entry surrounding the facility.

Inspection of the fence line and signs are included in the facility inspection plan (See Section F, Inspection Plan for additional details).

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B-6 Facility Process Unit Description:

As required in 40 CFR 270.14(b)(1), the following is a general overview of the facility; additional details are provided in Section D (Use and Management of Containers), Section E (Tank Systems), Section L (Solid Waste Management Units and Corrective Action) and Section M (Other Regulated Units). The hazardous waste management units at the facility include storage and treatment tanks, container management units, waste loading and unloading facilities and waste processing facilities. Typical sources of waste include automotive manufacturers, tire manufacturers, plating facilities, aircraft manufacturers, as well as the food processing, pharmaceutical, oil industries automotive repair shops, industrial maintenance operations, drycleaning facilities, and other industrial sources

Prior to acceptance of a waste stream, the facility requires the generator to supply specific information about the waste. After a review of information supplied by the generator has been deemed completed and prior to waste receipt at the facility, CHK personnel determine the proposed management practices for the waste at the facility. Generators are then advised that their waste stream may be accepted or that management of the waste stream at CHK has been denied. The properties of incoming waste streams (i.e., shipments) from the generator are compared against the information supplied prior to shipment. For further details regarding waste receipt and analysis, refer to Section C (Waste Characterization).

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Final and partial closure plans for the CHK facility are provided in Section J (Closure Plan). CHK maintains financial assurance for facility closure and insurance; details are described in Section K (Financial Requirements). Equipment (in hazardous waste service) removed for replacement during maintenance operations will be decontaminated and managed according to procedures similar to closure procedures as delineated in Section J.

B-6a **Process Area Description:**

A variety of hazardous waste management units are utilized for storage, treatment or to otherwise manage wastes at the CHK facility; e.g., container management units and tank systems as well as processing equipment. Section A (Part A Permit Application) lists storage buildings, tanks, and processes utilized by Clean Harbors Kansas, LLC. Additional buildings, such as an administration building, personnel change rooms, laboratory, and etc., are also provided to support the various unit operations. Refer to Figure B.3, Facility Layout (Drawing 50-01-01-002) for general location of these buildings.

The general location of waste management areas are depicted on Figure B.4, Hazardous Waste Management Areas (Drawing 50-01-10-001); flow of wastes between units is addressed in Section N (Air Emissions). A general description of tank, container and processing systems

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follows. Detailed discussions of these systems are provided in Sections D (Use and Management of Containers), E (Tank Systems) and M (Other Regulated Units).

Hazardous waste storage, treatment, and processing occur in seven storage areas at the CHK facility. Hazardous waste is managed in tanks, containers and process units in Building D and the Processing Area; Building C, the Drum Dock, Building B, Building I and Building J are utilized for hazardous waste management in containers and process units. An overview regarding these activities is presented in the following paragraphs.

B-6b Container Management Systems:

Seven (7) buildings at the facility are designated for container management. Permitted storage capacities for each building are designated in Addendum B to the Part A Permit Application (Section A). Container management areas will be operated such that the stored volume will not exceed the permitted capacity. The volume of waste stored in any of the container storage buildings is dictated by containment volumes and operational requirements. Specifics regarding container management at the facility are discussed in Section D, Container Management.

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B-6c Tank Systems:

A variety of tank systems are used at the CHK facility. Tanks are used to store and/or treat liquids, solids, and sludge. The tank systems presently in use or planned are identified and discussed in detail in Section E, Tank Systems.

B-6d Other Regulated Units:

Additional units are utilized for hazardous waste management activities at the CHK facility; these units are discussed in detail in Section M, Other Regulated Units.

B-6e Non-regulated Units and Activities:

In addition to hazardous wastes regulated under 40 CFR 264, other industrial wastes as well as selected household wastes are managed at the CHK facility. These wastes include, but are not limited to, used oil destined for burning for energy recovery (regulated under 40 CFR 266 Subpart E), synthetic oil reprocessing, industrial coolants and waste waters.

Processing equipment on-site as described in the Part A application may be utilized for management of non-hazardous waste. The procedures used for decontaminating equipment between hazardous waste service and subsequent non-hazardous waste service are provided in Attachment C-A to Section C (Waste Characterization) and Section E (Tank Systems).

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B-7 Anticipated Change of Operations/Units:

Additional waste management and operations planned for the CHK facility after permit issuance are of two types: 1) changes as a result of new regulations and permitting requirements, and 2) expansion of operations to meet the challenges of future local and regional waste management requirements. Anticipated waste management needs include:

- The addition of newly identified wastes (as they become regulated) to the Part A permit;
- Modification of the facility and permit application to accommodate evolving local, state, and federal regulations.

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Endnote References

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2. Lane, Charles W. and Don E. Miller, December, 1965. Geohydrology of Sedgwick County, Kansas. State Geological Survey of Kansas, Bulletin 176, 100 pp.
3. United States Department of Agriculture, Soil Conservation Service, April, 1979. Soil Survey of Sedgwick County, Kansas. 126 p.
4. Groundwater Technology, Inc., August 1991. Draft Remedial Investigation Report of the 29th and Mead RI/FS. Volume 1, prepared for Wichita North Industrial District, 60 pp.
5. Hershfield, David M., US Dept. of Commerce, Soil Conservation Service, Rainfall Frequency Atlas of the United States - Weather Bureau Technical Paper No. 40, 115 pp.
6. US Department of Commerce - National Oceanic and Atmospheric Administration, 1989. Local Climatological Data - Annual Summary With Comparative Data - Wichita, Kansas. ISSN 0198-2214, 8 pp.

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Appendix C-A Waste Analysis Plan

Acronym Table

Clean Harbors Kansas, LLC (CHK)
Kansas Administrative Regulations (KAR)
Resource Conservation and Recovery Act (RCRA)
Title 40 of the Code of Federal Regulations (40 CFR)
Waste Analysis Plan (WAP)
Environmental Protection Agency (EPA)
Toxic Substances Control Act (TSCA)
Polychlorinated Biphenyl (PCB)

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C. Waste Characterization: 40 CFR Parts 261, 262, 264, 268 and 270

The purpose of this section, Waste Characterization, is to provide a general description of the waste types anticipated for management, and the sampling and analytical procedures to be implemented, at Clean Harbors Kansas, LLC. This section is provided to fulfill the requirements of the Kansas Administrative Regulations (KAR), and 40 CFR Parts 261, 262, 264, 268, and 270. The KAR incorporate, with few additions, the RCRA regulations contained in 40 CFR Parts 260 through 270. Therefore, this section will refer only to the federal regulations.

This section contains a description of the provisions for waste sampling and analysis related to the management of wastes at CHK. These provisions have also been incorporated into a document referred to as the Waste Analysis Plan (WAP), which has been provided as Appendix C-A. The terms used in Section C will have the same meaning as those defined in the WAP.

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C-1 Chemical and Physical Analysis: 40 CFR 264.13(a) and 270.14(b)(2)

CHK has identified wastes that are acceptable for management at CHK, and wastes that will not be accepted for management at CHK. Wastes in these categories are identified below.

- Wastes Acceptable for Management: Materials acceptable for management at CHK will include solid wastes and hazardous wastes. There are two (2) general categories of hazardous wastes according to 40 CFR 261.3. These categories are:
 - Characteristic Wastes: Characteristic wastes exhibit any hazardous characteristic identified in 40 CFR Part 261, Subpart C. The characteristics are ignitability, corrosivity, reactivity, or toxicity.
 - Listed Wastes: Listed wastes include those wastes listed in 40 CFR Part 261, Subpart D.

These two (2) categories include "mixture rule" and "derived from rule" wastes which are described below.

- Mixture Rule Wastes: Mixture rule wastes are:

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- a mixture of a solid waste and a characteristic waste unless the mixture no longer exhibits any hazardous characteristic, or
 - a mixture of a solid waste and one or more listed hazardous wastes.
- Derived From Rule Wastes: Wastes subject to the derived from rule include any waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, or leachate.

Attachment C-B to the WAP contains a list of hazardous wastes that may be received at CHK. The wastes listed in Attachment C-B are referred to by EPA Hazardous Waste Number and by Hazard Code. The Hazard Code is used by EPA to indicate if the waste is reactive (R), toxic (T), corrosive (C), ignitable (I), an acute hazardous waste (H), or whether the waste exhibits the Toxicity Characteristic (E). The basis for designating these wastes as hazardous is provided in 40 CFR Part 261, Appendix VII.

The Hazardous Waste Numbers further classify the wastes. Hazardous Waste Numbers D001 through D043 refer to the "characteristic wastes." D001 represents wastes that are ignitable in character; D002, those that are corrosive; and D003, those that are reactive. Wastes whose extracts contain concentrations of specific inorganic or organic constituents above a specified level are assigned one of the numbers D004 through

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D043.

"Listed wastes" include four (4) groups of hazardous waste numbers. Hazardous wastes generated from non-specific industry sources such as degreasing and electroplating operations are listed with numbers beginning with the letter "F" (e.g., F001). Hazardous wastes from specific generating sources such as petroleum refining are assigned numbers beginning with the letter "K" (e.g., K048). Hazardous waste numbers beginning with "P" or "U" represent waste commercial chemical products and manufacturing chemical intermediates (whether on- or off-specification).

The wastes accepted at CHK will vary considerably in both composition and form. Various organic and inorganic constituents may be present in the wastes. Wastes will be liquid, solid, or multi-phasic. General waste descriptions include hazardous wastes of the following types: contaminated wastewaters, spent catalysts, electroplating wastes, metal-contaminated sludges, spent-solvent residuals, off-specification chemicals, and a variety of other waste types.

Each waste stream will be characterized prior to acceptance for management at the facility following the procedures described in Section 5.0 of the WAP. This pre-acceptance characterization will be used to determine the acceptability of waste streams

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for management at CHK. Profiles and other analytical data (as required) are maintained in the operating record for three years or longer.

- Waste Prohibited from Management: Materials which will not be accepted for management at CHK include, but are not limited to, the following.
 - Dioxin containing hazardous wastes identified by EPA Hazardous Waste Numbers F020, F021, F022, F023, F026, F027 and F028.
 - Regulated radioactive wastes and materials.
 - Infectious medical wastes.
 - TSCA regulated PCBs.

C-1a Receiving and Acceptance Criteria: 40 CFR 264.13(a), 264.172, 264.177, 264.191(a), 270.15(b)(1) and (d)

Prior to accepting a waste stream for management at CHK, the waste will be subject to the pre-acceptance procedures. The pre-acceptance procedures are described in Section 5.0 of the WAP. As part of these procedures, each waste stream will be evaluated for acceptability for management at CHK. The evaluation will be based on the characterization provided by a review of information about the waste as provided by the generator, or the value of, or a range of values for, a set of material parameters. A rationale for the selection of these parameters is

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provided in Section 2.0 of the WAP.

Waste shipments arriving at the facility for management will be subject to the incoming load procedures. The incoming load procedures are described in Section 6.0 of the WAP. As part of these procedures, each waste stream will be evaluated for conformity with the description of the waste determined during the pre-acceptance procedures.

There are several sampling and analysis considerations with respect to the management of wastes at CHK. These are described in Sections 6.0 and 7.0 in the WAP. These considerations include identification of waste with the characteristics of ignitability, corrosivity, or reactivity; waste which may be incompatible with other wastes; and waste which may be incompatible with the container or tank in which it is stored.

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C-2 Waste Analysis Plan: 40 CFR 264.13(b) and (c), 268.7, and 270.14(b)(3)

A copy of the WAP is provided as Appendix C-A. The WAP describes the procedures used to obtain chemical and physical information and data on the wastes to insure proper management and conformance with applicable land disposal restrictions. These procedures include:

- pre-acceptance procedures (Section 5.0 of the WAP);
- incoming load procedures (Section 6.0 of the WAP); and
- treatment, storage, and other management considerations (Section 7.0 of the WAP).

C-2a Parameters and Rationale: 40 CFR 264.13(b)(1)

General waste characterizations or profiles will first be developed by determining the value of, or the range of values for, a given set of parameters. These parameters are referred to as "mandatory" parameters. The list of mandatory parameters for the pre-acceptance and incoming load procedures is provided in Section 2.0 of the WAP.

In addition to performing analysis for the mandatory parameters, the values of other parameters may be determined at any time prior to, or during, management of the waste at

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CHK to more fully define waste characteristics. Since these parameters are discretionary, they are referred to as "supplemental" parameters. Examples of supplemental parameters are provided in Section 2.0 of the WAP.

The rationale for selecting waste characterization parameters used during pre-acceptance and incoming load procedures is also provided in Section 2.0 of the WAP.

C-2b Test Methods: 40 CFR 264.13(b)(2)

The typical analytical methods used to obtain the values of the mandatory parameters are described in Section 3.0 of the WAP. As new analytical procedures are developed, these procedures may be adopted and the WAP updated accordingly, as provided in 40 CFR 270.42.

C-2c Sampling Methods: 40 CFR Part 261, Appendix I, and 264.13(b)(3)

Section 4.0 of the WAP presents methods to be utilized by CHK to obtain a representative sample of wastes. These methods will apply to waste generated off-site (when sampled by CHK) as well as facility generated waste. Discussions of the circumstances under which the sampling will be performed are presented in Sections 5.0 through 7.0 of the WAP. The specific sampling methods selected are dependent on both the nature of the waste and the type

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of container or tank that the waste is in.

Other considerations with respect to sampling are also described in Section 4.0 of the WAP.

These other considerations include:

- Sampling Safety Precautions;
- Sampling Method References;
- Sampling Locations;
- Sampling Equipment;
- Frozen Shipments or Samples;
- Cleaning of Sampling Apparatus;
- Management of Samples After Analysis;
- Remote Project Sampling and/or Analysis;
- Lab Packs;
- Nonhazardous Wastes; and
- Vitrified, Cemented, and Other Materials Exhibiting High Structural Integrity.

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C-2d Frequency of Analysis: 40 CFR 264.13(b)(4)

An analysis of the wastes may be conducted at selected management stages including the following:

- Before a waste stream is accepted (pre-acceptance);
- When a waste arrives (incoming load);
- At selected management stages (in-process); and
- A minimum of every two years (recharacterization).

The decision to accept a waste for management at CHK will be in part based on a characterization or profile of the waste. At a minimum, this characterization is accomplished through knowledge of the waste or laboratory analysis of the waste during the pre-acceptance procedure. CHK will recharacterize incoming waste streams at least every two years to verify that the original characterization of the waste is still accurate. Any incoming load accepted at CHK must have been characterized (or recharacterized) within the last twenty-four (24) months. A sample of an incoming load may be used for the recharacterization. CHK may also repeat the pre-acceptance characterization if:

- a generator notifies that the process generating the waste has changed;

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- the incoming load is outside of the acceptance tolerance ranges provided in the WAP,
or
- it is suspected that a particular waste shipment differs from the pre-acceptance
characterization.

Any waste characterization or recharacterization that assigns or removes a hazardous waste characteristic code for a Kansas generated waste shall be performed by a Kansas certified laboratory in accordance with KAR 28-31-4(b)(3).

C-2e Additional Requirements for Wastes Generated Off-site: 40 CFR 264.13(b)(5), 264.13(c), and 264.73(a) and (b)

Using the information available from the generator, CHK will develop a characterization or profile of the waste stream during the pre-acceptance procedures. The activities involved with characterizing a waste for pre-acceptance purposes are provided below; additional description is provided in the WAP.

- Requirements of the Generator: The generator of a waste stream is required to provide information on the properties of the waste or the process generating the waste as described in Section 5.0 of the WAP.

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Waste Characterization**

- Analysis for Parameters (Mandatory and Supplemental): CHK may confirm certain waste characterization data supplied by the generator by analyzing the representative sample(s) of the waste for one or more of the mandatory or supplemental pre-acceptance parameters.
- Evaluation: After completing the pre-acceptance waste characterization, the acceptability of the waste for management at CHK will be determined. This determination will be based on permit conditions, availability of proper treatment techniques, and storage and off-site disposal capacities.

C-2f Additional Requirements for Handling Ignitable, Reactive, or Incompatible Wastes: 40 CFR 264.13(b)(6), and 264.17

Ignitable, reactive, and incompatible wastes will be received at CHK. Provisions for the identification of wastes with these characteristics have been included in the WAP. These provisions are described in Sections 5.0, 6.0, and 7.0 of the WAP.

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Waste Characterization**

C-3 Additional Waste Characterization Requirements Pertaining to the Land Disposal Restrictions: 40 CFR 264.13 (a)(1), 264.13(b)(6), 268.7, 270.14(b)(3)

Information submitted by the generator (or a representative of the generator) for the waste streams managed at CHK may include notifications required by 40 CFR 268.7, laboratory analytical data, or information based on knowledge of the waste or of the process generating the waste. This information will be used to determine if the waste is subject to the restrictions on the placement of hazardous waste in a land-based disposal unit (i.e., restricted under 40 CFR Part 268). Provisions for the identification and analysis of wastes which are subject to these restrictions are described in Sections 5.0, 6.0, and 7.0 of the WAP.

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Drawing 50-18-10-001	Building J

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Acronym Table

Clean Harbors Kansas, LLC (CHK)
Intermodal Container (IMC)
Container Management Unit (CMU)
Personal Protection Equipment (PPE)
Waste Analysis Plan (WAP)
National Fire Protection Association (NFPA)
United States Department of Transportation (USDOT)

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D Introduction:

The purpose of this section is to provide information regarding the design and operation of the various container management units at the Clean Harbors Kansas, LLC (CHK). This information is provided to fulfill the requirements of Kansas Administrative Regulations (KAR), Title 28, Article 31 as well as federal regulations as set forth in 40 CFR Part 264 Subpart I, and 40 CFR 270.15. The KAR incorporate, with few additions, the RCRA regulations contained in 40 CFR Parts 260 through 270. Therefore, this section will refer only to the federal regulations.

As used in this permit application, the term "drum" is intended to describe a specific type of container, namely a fifty-five (55) gallon drum, approximately twenty-three (23) inches in diameter and thirty-four (34) inches high. The term "bulk container" is used to describe any container with a capacity greater than 450 gallons. Roll-on/roll-off boxes, gondolas, sludge boxes and Intermodal Container (IMC)s are examples of types of bulk containers that may be managed at Clean Harbors Kansas, LLC. Otherwise, the term container, as used in this application, shall have the same meaning as that listed in 40 CFR 260.10.

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D-1 Summary Description:

Referenced Drawings

Drawing 50-01-10-001	Hazardous Waste Management Areas
Drawing 50-01-10-002	Material Containment Areas

There are seven (7) storage buildings that are subdivided into individual Container Management Unit (CMU)s at the CHK facility utilized for container storage and processing of hazardous waste; CMUs allow flexibility of management options within the various container storage buildings. Location of these storage buildings is shown on Figure D.1, Hazardous Waste Management Areas and individual CMUs are shown on Figure D.2, Material Containment Areas. Figures showing individual storage buildings are presented in Appendix D-A, Container Storage Buildings; corresponding drawings are located in Section Y, Referenced Drawings. Specific information regarding areal extent, capacity and drum equivalents is discussed in Section A (Part A Permit Application; Addendum B). Capacities of container storage buildings are summarized in Table D.1, Container Storage Building Capacities. Table D.2, CMU Containment Summary, presents containment capacities for each CMU. The total permitted capacity for storage of containers at the CHK facility is 325,490 gallons.

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Figure D-1 Hazardous Waste Management Areas

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Figure D-2 Material Containment Areas

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CHK has made the assumption, for design purposes, that all containers of hazardous wastes managed at LESW contain free liquid; thus, containment as prescribed in 40 CFR 264.175 is provided for all CMUs. The design does not preclude storage of wastes that do not contain free liquids.

40 CFR 264.175(b)(3) requires that the secondary containment system contain the volume of the largest container, or ten (10) percent of the volume of the containers in the unit, whichever is greater. Containment areas have been designed to meet this requirement. Secondary containment calculations are shown in Appendix D-B, Secondary Containment Calculations.

A wide variety of containers other than drums may be stored within the waste storage buildings. Wastes with free liquids may be stored in containers such as tote boxes, overpack containers, etc. The total volume of waste in containers is limited by the secondary containment volumes provided for each CMU and by the capacity of each storage building. The total volume of waste stored at the facility will not exceed the permitted amount (i.e., 325,490 gallons).

Containerized hazardous wastes are delivered to the facility by truck or rail car. These containers may be managed in unloading areas prior to waste storage. Railcar receipt and unloading will take up to 10 days. Similarly, loading and shipment of railcars off-site may take up to 10 days. On occasion, CHK will receive railcars, analyze the wastes, and

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remanifest the railcars off-site without off-loading. Clean Harbors Kansas, LLC may also transfer loads of containers from truck to rail under the 10-day transfer provisions (40 CFR 264.1(g)) without site receipt.

Containers may be located within other waste management units and are used to accumulate and store site generated residues such as pump strainer residues, tank bottoms, in-line process materials, incidental spills, discarded Personal Protective Equipment (PPE), etc. CHK will manage these wastes according to the standards set forth in 40 CFR Part 262. Containers of on-site generated wastes will not be accumulated for more than ninety (90) days within these areas, and will be accumulated in containers complying with 40 CFR 264 Subpart I.

Storage building CMUs have been designed to receive many categories of waste streams in drums, overpacks, gondolas, tote boxes, etc. The number of segregated containment units provides the capability to store various waste types within certain units, and meet the requirements for managing reactive, ignitable and incompatible wastes. Any of the CMUs may be used to store any container type and volume as dictated by operational needs and compatibility requirements. Specifications regarding layout of these buildings are presented later in this section; brief descriptions of each storage building are provided below.

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D-1a Building D:

The layout of Building D is designed to accommodate storage of wastes in containers and tanks (tank management is addressed in Section E, Tank Systems).

Waste managed in this area may be processed or treated in containers as well as managed in one or more of the tanks or process units on site. Diking and berms divide this building into four (4) contained sections; three (3) of these sections are utilized for storage of hazardous waste in containers.

D-1b The Process Area:

The Process Area is designed to accommodate storage of wastes in containers and tanks (tank management is addressed in Section E, Tank Systems). Several process units are located there: the Drum Scraper, Drum Washing, and Dispersing Units (see Section M, Other Regulated Units). Waste managed in this area may be processed or treated in containers as well as managed in one or more of the tanks or process units on site. This building is managed as two operational areas which share common secondary containment.

D-1c Building C:

Building C is utilized for container storage, treatment, and management. Waste managed in

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this area may be processed or treated in containers. Diking divides this building into seven (7) contained areas.

D-1d Drum Dock:

The Drum Dock is utilized for container storage, treatment, and management. Waste managed in this area may be processed or treated in containers. Diking provides one (1) contained area in this building.

D-1e Building B:

Building B is utilized for container storage, treatment, and management. Waste managed in this area may be processed or treated in containers. Diking divides this building into four (4) contained areas.

D-1f Building I:

Building I is designated for container storage, treatment, and management. Waste managed in this area may be processed or treated in containers. Rooms and diking in this building will provide containment for three (3) separate CMUs.

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D-1g Building J:

Building J is designated for container storage, treatment, and management. Waste managed in this area may be processed or treated in containers. Rooms and diking in this building will provide containment for seven (7) separate CMUs.

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Table D.1

Container Storage Building Capacities

Container Storage Building	Materials Managed	Permitted Storage Capacity (Gallons)	Storage Capacity (55 Gallon Drum Equivalents)
Building D	Ignitable and/or non-ignitable or combination of both	46,640	848
Processing Area	Liquid and solid hazardous and/or non-hazardous materials	9,900	180
Building C	Ignitable and non-ignitable hazardous and non-hazardous materials	99,110	1,802
Drum Dock	Containerized materials	14,960	272
Building B	Corrosives and other non-ignitable hazardous and non-hazardous materials	55,000	1,000
Building I	Hazardous and non-hazardous materials	50,600	920
Building J	Hazardous and non-hazardous materials	49,280	896
Total Capacity		325,490	5,918

Note: Total capacity (gallons) is the additive container storage capacity for all storage buildings. Note that additional storage of waste in tanks occurs in some of these areas; permitted waste tank storage capacity is not reflected in this summary.

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Table D.2

CMU Containment Summary

Container Management Unit (CMU)	Maximum Number of Drums Stored (55 gallon drum equivalents)		Gallons - Containment Capacity Required for Containers (10 % Container Capacity)	Gallons - Containment Provided
	Drums	Gallons		
D100/D200	784	43,120	4,312	13,480
D300	64	3,520	352	3,606
P100/P200	180	9,900	990	32,583
C100	16	880	88	244
C200	16	880	88	192
C300	240	13,200	1,320	3,842
C400	184	10,120	1,012	3,195
C500	192	10,560	1,056	3,233
C600	192	10,560	1,056	3,233
C700	962	52,910	5,291	16,690
L100	272	14,960	1,496	1,835
B100	120	6,600	660	2,262
B200	384	21,120	2,112	5,592
B300	360	19,800	1,980	5,630
B400	136	7,480	748	2,582
I100	416	22,880	2,288	4,503
I200	64	3,520	352	635
I300	440	24,200	2,420	6,088

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J100		448	24,640	2,464	6,787
J200		96	5,280	528	987
J300		64	3,520	352	502
J400		64	3,520	352	502
J500		64	3,520	352	502
J600		64	3,520	352	502
J700		96	5,280	528	754

Note 1: These containment volume requirements do not include requirements for tank systems. The letter shown in the CMU identification number indicates the location by building (D - Building D, P - Processing Area, C - Building C, L - Drum Dock, B - Building B, I - Building I, and J - Building J).

Note 2: The largest container in Area I100 would be a 5,000 gallon tanker. The containment provided (5,399 gallons) is sufficient to hold the volume of this container.

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D-2 Storage in Containers with Free Liquids:

D-2a General Area Design Features:

Waste storage buildings were constructed for industrial use and are generally of metal or cinder block fabrication. Buildings perform a variety of functions including control of access, ambient temperature, precipitation ingress, and wind effects such as dust generation.

The storage buildings are covered to minimize ingress of precipitation. The individual CMUs are constructed on concrete pads with perimeter curbs (diking) to contain potential spills, to prevent run-off, and to prevent run-on. Containment capacity is adequate to contain incidental precipitation (i.e., precipitation blown in).

Secondary containment consists of concrete diking/walls or block construction on concrete pads. Concrete pads and diking/walls that make up the secondary containment are maintained to prevent or repair cracks and gaps. All joints contain a continuous water stop or are otherwise sealed to prevent migration of liquids.

Diking separates containment areas of individual CMUs. Waste containers are palletized or equipped with skids during storage, or are otherwise managed to protect the outside walls of the containers from contact with accumulated liquids. Concrete surfaces of the secondary containment systems are sufficiently impervious to contain leaks, spills, and accumulated

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precipitation until the collected material is detected and removed.

Rooms have open areas which provide maneuvering room for mobile equipment such as forklifts, and, if needed, for staging and/or stacking of drums during pre-acceptance and processing.

D-2b Unloading Areas:

Containerized hazardous wastes are unloaded onto loading docks, loading areas, or directly into areas provided with secondary containment. Containers are placed into CMUs upon completion of unloading procedures or within 72 hours, whichever comes first. Appendix C-A provides a more detailed discussion of these procedures.

Prior to placement in permitted storage, waste in containers will be managed in unloading areas and/or staged in an appropriate CMU. Containers arriving on-site by truck may be unloaded at any of the seven (7) storage buildings; rail spur shipments may be unloaded directly into Building C, Building D, Process Area, Building I, or Building J, or transferred to other buildings as needed. See Figure D.1, Hazardous Waste Management Areas, for location of unloading areas.

Two (2) buildings are equipped with truck loading docks. These docks are located on the

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south and west sides of Building J and to the west of the Drum Dock container storage area. Truck bays are located in Building I (I100) and the Process Area (P100). Containers are moved in and out of the various buildings utilizing ramps installed to facilitate movement of equipment and materials over containment dikes.

D-2c Building D:

Referenced Drawings

Drawing 50-16-10-001 Building D

Building D is designed to manage hazardous waste in tanks and containers in several CMUs (tank storage in this area is addressed in Section E, Tank Systems). Containerized wastes managed in this building include both ignitable and non-ignitable materials and combinations. These materials are destined either for on-site management, recycling as waste fuel, waste water management, solvent recovery, or transport off-site for additional management. Processing of containerized wastes in Building D may involve treatment in containers or management in any of the several on-site processing units. Some portable units (e.g., filters, etc.) may be present or used in this area.

The principal processes that occur in Building D are decanting of liquids, treatment in containers, repackaging, bulking, phase separation, consolidation of solid residues, and

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loading and unloading of hazardous waste in containers.

D-2c(1) Secondary Containment:

Building D is divided into four operational areas: D100, D200, D300, and D400. Areas D100 and D200 share common secondary containment for containers. Areas D300 and D400 are independent, separated by diking or berms from each other and from D100/D200. These areas are shown on Figure D.2, Material Containment Areas, and Figure D.3, Building D, presented in Appendix D-A (Drawing 50-16-10-001 in Section Y). The secondary containment areas are constructed of concrete floors and concrete or cinder block diking which are free of cracks and gaps. Additionally, the floor and diking of area D400 has been lined with a chemically resistant coating to comply with the requirements of 40 CFR 264.193. The CMUs are designed to meet the storage requirements for RCRA regulated wastes, to promote sound container management practices, and to minimize the potential for a release of hazardous waste into the environment.

40 CFR 264.175(b)(3) requires that the secondary containment system contain the volume of the largest container, or ten (10) percent of the volume of the containers in the unit, whichever is greater. Any size container may be managed in a CMU provided that the maximum sized container does not exceed the CMU's containment volume. Detailed calculations supporting the secondary containment and storage volumes in Building D may be found in Attachment 1

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of Appendix D-B.

D-2c(2) Building Design:

Building D consists of several rooms and its overall size is approximately one-hundred-fifty-four (154) feet long by one-hundred-ten (110) feet wide. Waste containers are palletized or equipped with skids during storage, or are otherwise managed to protect the outside walls of the containers from contact with accumulated liquids. Some management of containers may occur directly on the concrete floor (e.g., during processing). Concrete curbs or walls around the unit or portable containment units provide secondary containment. Adequate secondary containment volume is provided for this building as described in D-2c(1).

D-2d Processing Area:

Referenced Drawings

Drawing 50-55-10-001 Processing Area

The Processing Area is designed to manage hazardous wastes in tanks and containers in two operational areas with shared secondary containment (storage in tanks is addressed in Section E, Tank Systems). Containerized wastes managed in this area include liquids that will be pumped to bulk storage and solids which will be handled in the Drum Processing Area. These

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materials are destined for on-site management, recycling as waste fuel, waste water management, solvent recovery, or transport off-site for additional management. Processing of containerized wastes in this area may involve treatment in containers or management in any of the several on-site processing units. Processing units (discussed in Section M, Other Regulated Units) permanently located in the Processing Area include: 1) the Drum Scraper Unit, 2) the Drum Washing Unit, and 3) the Dispersing Unit. Some portable units (e.g., filters, pumps, etc.) may be present or used in this area.

The principal processes that occur in the Processing Area are decanting of liquids, treatment in containers, other physical treatment (including dispersing and scraping), repackaging, bulking, consolidation of solid residues, and loading and unloading of hazardous waste in containers.

Waste management in the container process line is briefly summarized below. Free liquids may first be decanted from containers. Decanting from containers may be performed on a conveyor or elsewhere in a CMU, using decanting wands, diaphragm pumps, or another suitable method. Containers may also proceed directly to the Dispersing Unit. When appropriate, containers that are found to contain solids or non-flowable sludges may bypass the Dispersing Unit and be returned to storage for alternate management, or for eventual shipment off-site, or loaded immediately for shipment off-site. Materials removed from containers are transferred to processing units, tankers, other containers, or tanks for blending, treatment, off-site shipment, or storage. Storage tanks are provided for low BTU liquids, chlorinated and

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nonchlorinated solvents, waste fuels, aqueous/solvent mixtures, and recovered solvents. The operation of the tank systems and the design of the Dispersing Unit are described in detail in Section E, Tank Systems, and in Section M, Other Regulated Units, respectively. If, after decanting, a container is determined to be "RCRA empty" as per 40 CFR 261.7, it may be sent for recycling, for reuse, or for off-site disposal; containers may be crushed on-site prior to shipment for disposal. If a container holds RCRA regulated material that cannot be practicably removed, the container is further managed as RCRA waste. Materials removed from containers may be processed in the Dispersing Unit or in another appropriate unit. Waste solvent or fuel may be added to the wastes in the Dispersing Unit to enhance processing (e.g., breaking up lumps and rendering the waste pumpable). Pumpable wastes are then transferred to a storage tank or directly transported off-site for further management. After emptying, the container and any remaining residues will be managed as described above.

D-2d(1) Secondary Containment:

The Processing Area is divided into two (2) operational areas, P100 and P200. These two areas are managed as a shared secondary containment system. These areas are shown on Figure D.4, Processing Area, presented in Appendix D-A (Drawing 50-55-10-001 in Section Y). The CMUs are designed to meet the storage requirements for RCRA regulated wastes, to promote sound container management practices, and to minimize the potential for a release of hazardous waste into the environment. The CMUs are constructed of concrete floors and

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diking which are free of cracks and gaps. Additionally, the entire area has been lined with a chemically resistant coating to comply with the requirements of 40 CFR 264.193.

40 CFR 264.175(b)(3) requires that the secondary containment system contain the volume of the largest container, or ten (10) percent of the volume of the containers in the unit, whichever is greater. Any size container may be managed in a CMU provided that the maximum sized container does not exceed the CMU's containment volume. Detailed calculations supporting the secondary containment and storage volumes in the Processing Area may be found in Attachment 2 of Appendix D-B.

D-2d(2) Building Design:

The Processing Area consists of one CMU shared by two operational areas, and its overall size is approximately eight-three (83) feet long by seventy-one (71) feet wide. Waste containers managed in the Processing Area are palletized or equipped with skids during storage, or are otherwise managed to protect the outside walls of the containers from contact with accumulated liquids. Some management of containers may occur directly on the concrete floor (e.g., during processing). Concrete curbs or walls around the unit or portable containment units provide secondary containment. Adequate secondary containment volume is provided for this building, as described in D-2d(1).

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D-2e Building C:

Referenced Drawings

Drawing 50-15-10-001 Building C

Building C is designed to manage containerized wastes in seven (7) CMUs. Containerized wastes managed in Building C include ignitable and non-ignitable hazardous and non-hazardous wastes. These materials are destined for on-site management, recycling as waste fuel, waste water management, solvent recovery, or transport off-site for additional management. Processing of containerized wastes in Building C may involve treatment in containers or management in any of the several on-site processing units.

The principal processes which occur in Building C are storage, treatment in containers, repackaging, bulking, consolidation of solid residues, and loading and unloading of hazardous waste in containers.

D-2e(1) Secondary Containment:

Building C is divided into seven (7) areas (CMUs) of secondary containment by diking. These areas are shown on Figure D.5, Building C presented in Appendix D-A (Drawing 50-15-10-001 in Section Y). The CMUs are designed to meet the storage requirements for RCRA

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regulated wastes, to promote sound container management practices, and to minimize the potential for a release of hazardous waste into the environment. The CMUs are constructed of concrete floors and diking which are free of cracks and gaps.

40 CFR 264.175(b)(3) requires that the secondary containment system contain the volume of the largest container, or ten (10) percent of the volume of the containers in the unit, whichever is greater. Any size container may be managed in a CMU provided that the maximum sized container does not exceed the CMU's containment volume. Detailed calculations supporting the secondary containment and storage volumes in Building C may be found in Attachment 3 of Appendix D-B.

D-2e(2) Building Design:

Building C consists of seven (7) CMUs, and its overall size is approximately three-hundred-thirty-eight (338) feet long by forty (40) feet wide. Waste containers managed in Building C are palletized or equipped with skids during storage, or are otherwise managed to protect the outside walls of the containers from contact with accumulated liquids. Some management of containers may occur directly on the concrete floor (e.g., during processing). Concrete curbs or walls around the unit or portable containment units provide secondary containment. Adequate secondary containment volume is provided for this building, as described in D-2e(1).

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D-2f Drum Dock:

Referenced Drawings

Drawing 50-15-10-002 Drum Dock

The Drum Dock is designed to manage containerized wastes in one (1) contained area (CMU).

Containerized wastes managed in this area include hazardous and non-hazardous materials.

These materials are destined for on-site management, recycling as waste fuel, waste water management, solvent recovery, or transport off-site for additional management. Processing of containerized wastes in this area may involve treatment in containers or management in any of the several on-site processing units.

The principal processes that occur in the Drum Dock are storage, treatment in containers, repackaging, bulking, consolidation of solid residues, sampling, and loading and unloading of hazardous waste in containers.

D-2f(1) Secondary Containment:

The Drum Dock is made up of one area (CMU); this area is diked to provide secondary containment. The area is shown on Figure D.6, Drum Dock presented in Appendix D-A (see Drawing 50-15-10-002). This CMU is designed to meet the storage requirements for RCRA

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regulated wastes, to promote sound container management practices, and to minimize the potential for a release of hazardous waste into the environment. The CMU is constructed of a concrete floor and diking which are free of cracks and gaps. Additionally, the CMU has been lined with a chemically resistant coating for added protection.

40 CFR 264.175(b)(3) requires that the secondary containment system contain the volume of the largest container, or ten (10) percent of the volume of the containers in the unit, whichever is greater. Any size container may be managed in a CMU provided that the maximum sized container does not exceed the CMU's containment volume. Secondary containment calculations for the Drum Dock are presented in Attachment 4 of Appendix D-B.

D-2f(2) Building Design:

The Drum Dock consists of one (1) area (CMU), and its overall size is approximately ninety-four (94) feet long by twenty-seven (27) feet wide. Waste containers managed in the Drum Dock are palletized or equipped with skids during storage, or are otherwise managed to protect the outside walls of the containers from contact with accumulated liquids. Some management of containers may occur directly on the concrete floor (e.g., during processing). Concrete curbs or walls around the unit or portable containment units provide secondary containment. Adequate secondary containment volume is provided for this building, as described in D-2f(1).

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D-2g Building B:

Referenced Drawings

Drawing 50-14-10-001 Building B

Building B is designed to manage containerized wastes in four (4) contained areas (CMUs). Containerized hazardous wastes managed in these areas include corrosives and other non-ignitable materials. These wastes are destined for on-site management, recycling as waste fuel, waste water management, solvent recovery, or transport off-site for additional management. Processing of containerized wastes in this area may involve treatment in containers or management in any of the several on-site processing units.

The principal processes that occur in Building B are storage, treatment in containers, repackaging, bulking, consolidation of solid residues, sampling, and loading and unloading of hazardous waste in containers.

D-2g(1) Secondary Containment:

Building B is made up of four (4) areas (CMUs); these areas are diked to provide secondary containment. The areas are shown on Figure D.7, Building B presented in Appendix D-A (Drawing 50-14-10-001 in Section Y). The CMUs are constructed of concrete floors, and

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concrete or cinder block diking which are free of cracks and gaps. The CMUs are designed to meet the storage requirements for RCRA regulated wastes, to promote sound container management practices, and to minimize the potential for a release of hazardous waste into the environment.

40 CFR 264.175(b)(3) requires that the secondary containment system contain the volume of the largest container, or ten (10) percent of the volume of the containers in the unit, whichever is greater. Any size container may be managed in a CMU provided that the maximum sized container does not exceed the CMU's containment volume. Containment calculations supporting the secondary containment and storage volumes in Building B are presented in Attachment 5 of Appendix D-B.

D-2g(2) Building Design:

Building B consists of four (4) areas (CMUs), and its overall size is approximately one-hundred-eighty-eight (188) feet long by forty-nine (49) feet wide. Containerized wastes in Building B will be stored on pallets or otherwise managed to protect containers from contact with potential accumulated liquids. Some management of containers may occur directly on the concrete floor (e.g., during processing). Concrete curbs or walls around the unit or portable containment units provide secondary containment. Adequate secondary containment volume is provided for this building, as described in D-2g(1).

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D-2h Building I:

Referenced Drawings

Drawing 50-17-10-001 Building I

Building I is an existing Interim Status waste management area that has undergone renovation.

This section has been written to recognize the configuration and usage of Building I as it will be operated now that the renovations are completed.

Building I has been designed to manage containerized wastes in three (3) contained areas (CMUs). Containerized wastes managed in this building include ignitable, non-ignitable, reactive, non-reactive and other hazardous and non-hazardous wastes. These materials are destined primarily for off-site management, but may also be destined for on-site management, recycling as waste fuel, waste water management, or solvent recovery. Processing of containerized wastes in Building I may involve treatment in containers, repackaging or management in any of the several on-site processing units.

The principal processes which occur in Building I are storage, treatment in containers, repackaging, bulking, consolidation, and loading and unloading of hazardous waste in containers.

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D-2h(1) Secondary Containment:

Building I is designed with three (3) CMUs (I100 through I300) which are diked or walled to provide secondary containment. The layout of Building I is shown on Figure D.8, presented in Appendix D-A. The CMUs are designed to meet the storage requirements for RCRA regulated wastes, to promote sound container management practices, and to minimize the potential for a release of hazardous waste into the environment. The CMUs are constructed of concrete floors and diking, and concrete block walls. Seams in the floor are sealed using water stops.

40 CFR 264.175(b)(3) requires that the secondary containment system contain the volume of the largest container, or ten (10) percent of the volume of the containers in the unit, whichever is greater. Any size container may be managed in a CMU provided that the maximum sized container does not exceed the CMU's containment volume. Detailed calculations supporting the secondary containment and storage volumes in Building I may be found in Attachment 6 of Appendix D-B.

D-2h(2) Building Design:

Building I has been subdivided into three (3) CMUs. The building has an overall size of

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approximately one-hundred-six (106) feet long by forty-eight (48) feet wide. Waste containers managed in Building I are palletized or equipped with skids during storage, or are otherwise managed to protect the outside walls of the containers from contact with accumulated liquids. Some management of containers may occur directly on the concrete floor (e.g., during processing). Concrete curbs or walls around the unit or portable containment units provide secondary containment. Adequate secondary containment volume is provided for this building, as described in D-2h(1).

D-2i Building J:

Referenced Drawings

Drawing 50-18-10-001 Building J

Building J is an existing Interim Status waste management area that is currently undergoing renovation. This section has been written to recognize the configuration and usage of Building J as it will be operated when the renovations are completed.

Building J has been designed to manage containerized wastes in seven (7) CMUs. Containerized wastes managed in this building include ignitable, non-ignitable, reactive, non-reactive, and other hazardous and non-hazardous wastes. These materials are destined primarily for off-site management, but may also be destined for on-site management, recycling

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as waste fuel, waste water management, or solvent recovery. Processing of containerized wastes in Building J may involve treatment in containers, repackaging, or management in any of the several on-site processing units.

The principal processes that occur in Building J are storage, treatment in containers, repackaging, bulking, consolidation, and loading and unloading of hazardous waste in containers.

D-2i(1) Secondary Containment:

Building J is designed with seven (7) CMUs, (J100 through J700), which are all diked or walled to provide secondary containment. The layout of Building J is shown on Figure D.9 (Drawing 50-18-10-001) in Appendix D-A. The CMUs are designed to meet the storage requirements for RCRA regulated wastes, to promote sound container management practices, and to minimize the potential for a release of hazardous waste into the environment. The CMUs are (will be) constructed of concrete floors and diking, and concrete block walls. Seams in the floor are (will be) sealed using water stops.

40 CFR 264.175(b)(3) requires that the secondary containment system contain the volume of the largest container, or ten (10) percent of the volume of the containers in the unit, whichever is greater. Any size container may be managed in a CMU provided that the maximum sized

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container does not exceed the CMU's containment volume. Detailed calculations supporting the secondary containment and storage volumes in Building J may be found in Attachment 7 of Appendix D-B.

D-2i(2) Building Design:

Building J has been subdivided into seven (7) CMUs. The building has an overall size of approximately one-hundred-sixty-two (162) feet long by forty (40) feet wide. Waste containers managed in Building J are palletized or equipped with skids during storage, or are otherwise managed to protect the outside walls of the containers from contact with accumulated liquids. Some management of containers may occur directly on the concrete floor (e.g., during processing). Concrete curbs or walls around the unit or portable containment units provide secondary containment. Adequate secondary containment volume is provided for this building, as described in D-2i(1).

D-2j Bulk Container Storage:

Bulk containers such as IMCs, gondola boxes, roll-on/roll-offs, and sludge boxes may be delivered by truck directly to the facility or by rail to the site or to a nearby siding. Containerized hazardous wastes are unloaded onto loading docks, loading areas, or directly into areas provided with secondary containment. Depending upon the volume of shipments

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arriving at the facility, the bulk containers may either be sampled upon arrival, or placed in a loading area or in one of the container storage areas prior to completion of the incoming load procedures. Bulk containers of wastes will be placed in a CMU within 72 hours of arrival at the site, with the exception of railcars. IMCs and other bulk rail containers holding wastes will be off-loaded within 10 days of arrival at the site.

Transport vehicles hauling wastes (e.g., end dump trucks, van trailers, and tankers, with or without tractors) may be stored in the truck bay portion of the Processing Area or adjacent to Building I and/or Building J. After sampling and incoming load procedures are complete, the bulk containers may remain in storage, be managed on-site, or be shipped off-site for alternate management.

The truck bay is of sufficient width to allow adequate aisle spacing to be maintained along the side of the building and containment structure. Aisle spacing of approximately two (2) feet or more will be maintained between double rows or pallets of containers. This spacing will allow inspection along the sides of the containers for leaks and proper labeling. The maximum sized RCRA container managed in a CMU is limited to the CMU containment volume; adequate containment is provided in the truck bay for management of any size container or bulk transport vehicles in this CMU. Containment capacity for the truck bay is addressed in section D-2d(1), which discusses the Processing Area, of which the truck bay is a part.

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Area I100 in Building I is designed to store up to two bulk containers (e.g., tanker, gondola, etc.) or van trailers. Adequate containment is provided in Area I100 for storage of up to two bulk containers plus additional containers, maintaining aisle space of at least two feet. At no time will the maximum storage exceed the permitted capacity identified in Table D-2.

Secondary containment capacity is discussed in Attachment D.8 and Section D-2h.

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D-3 General Container Management Practices:

D-3a Description of Containers:

The CMUs are capable of receiving and processing containers, both new and used, of various materials of construction, sizes, and capacities. The volume of individual containers managed in the CMUs is typically 450 gallons or less, except in the truck bay area, Building C, Building D, Building I, and in the Process Area where, after processing, wastes may be placed into bulk containers which may have volumes up to fifty-four (54) cubic yards. A wide variety of other containers, such as paint cans, Marino bags, wooden cases, plastic tote tanks, and glass bottles may also be received.

Bulk containers managed on-site include, but are not limited to, IMCs, sludge boxes, gondolas, tankers, end dumps, and railcars. Some storage areas have secondary containment and design capabilities for bulk containers. Bulk containers may be used for virtually any of the waste types handled at the facility. LESW will not place wastes into an unwashed container that has previously held incompatible wastes.

D-3b Handling of Containers: 40 CFR 264.173.

The majority of containers managed at the CHK facility are expected to be drums or similar containers delivered in van trailers. An industrial truck equipped with drum handling forks or

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a single container hand trolley will generally be employed to unload non-palletized shipments. Palletized containers will generally be unloaded with an industrial truck equipped with forks. Other container movement equipment may be used as available and appropriate. Ramps will be used as necessary during transfer operations to facilitate movement of materials in and out of CMUs.

Containers may be moved within the facility by hand, by industrial truck, truck, railcar, or by other safe and appropriate means (e.g., conveyor). The specific method employed will be dependent on the distance, and the quantities and sizes of containers to be moved.

When moving containers between storage areas, loading areas, and/or process areas, the facility may need to temporarily stage containers prior to transfer to the next unit. This staging will generally occur in the unloading areas or in the area between Building C and the Processing Area. All staging will occur in paved areas. This staging of containers will not exceed one shift or eight hours.

Equipment is available to facilitate such operations as the transfer of wastes from a damaged container to a container in good condition, the manual repackaging of containers, the transfer of leaking containers into overpacks, and the removal of individual containers from CMUs.

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During the unloading procedure, the containers will be visually checked. Those containers selected for sampling and analysis will be opened and sampled as described in Section C, Waste Characterization, Appendix C-A, Waste Analysis Plan (WAP). Sampling may occur on the unloading platform, in the working area, in a CMU or, prior to unloading, on the transport vehicle. Once samples have been obtained, the containers will be re-closed and will remain staged or be placed in a CMU until incoming load procedures are completed in accordance with the WAP. Containers that are not already in a containment unit will be moved into a CMU after the incoming load procedures are completed and the waste stream is accepted. If incoming load procedures cannot be completed in 72 hours, containers will be placed in an appropriate CMU, based on manifest, pre-acceptance, and other information available about the waste. If subsequent analytical or other information identifies a compatibility problem, the container will be moved to an appropriate CMU, rejected and returned to the generator, or transferred to another facility capable of handling the material.

Containers will be opened by one of a variety of methods. Liquid storage containers equipped with screw-in bungs in the lids will generally be sampled by removing the bung, withdrawing a sample and replacing the bung. Containers with fully removable tops (i.e., with retaining rings) will generally be opened by removing the lid and ring, sampling and replacing the lid and ring.

Containers are normally kept closed during storage. However, they may be opened for:

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- inspection,
- sampling,
- treatment within the containers, and/or
- removal/addition of material.

Regularly scheduled inspections of the CMUs, loading/unloading areas, and processing areas are conducted to facilitate detection of open or deteriorating containers, improper storage in the CMUs, liquids on the floors or in sumps, or other improper conditions as outlined in Section F, Inspection Plan. The frequencies of these inspections are defined in the Inspection Plan.

Hazardous and non-hazardous wastes may be stored within the same CMU, but they will not be stored on the same pallet, except insofar as they have been received on the same pallet (e.g., lab packs, wrapped pallets, etc.). The Waste Tracking System will provide a record of the location of all wastes at the facility. This report will be available for facility personnel and inspectors to identify the location of both hazardous and non-hazardous wastes at the facility.

For purposes of meeting the requirements of 40 CFR 268.50, containers are dated during the incoming load or off-loading procedures.

As the newly proposed second phase of the air emission standards for hazardous waste

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facilities becomes final, CHK will address and implement air emission control devices for the affected container management activities as applicable.

D-3b(1) Containers - 55 Gallon or Larger:

At times, 55 gallon or larger containers may be stacked two (2) high (double-stacked), providing that the wastes are compatible and that such stacking is consistent with the National Fire Protection Association (NFPA) code for flammable storage.

Inspection aisles of two (2) feet or more in width will be maintained between adjacent double rows of 55-gallon or larger containers in CMUs.

The bottom layer of containers in storage are placed on pallets or skids, or are otherwise managed to prevent contact of containers with any accumulated liquids. Rows will be no more than two (2) 55-gallon or larger containers wide. Dividers such as wooden pallets or plywood sheeting may be placed on top of the bottom row(s) of drums. A second layer of containers may be placed on top of the bottom row.

D-3b(2) Containers - Smaller Than 55 Gallon:

Smaller containers, particularly those small volume containers such as pint, quart, gallon, and

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five (5) gallon sizes, may be stored in stacks more than two (2) high, and will frequently be received that way. Any stacking of containers not specifically regulated by the NFPA code will be performed with safety of personnel uppermost in mind. Stacking of containers of less than fifty-five (55) gallon capacity will be restricted to a height not to exceed six (6) feet to facilitate inspection. This does not preclude, as an accepted management practice, the placing of large numbers of small containers within drums or larger overpack containers, and the double stacking of these larger containers, nor the storage of individual containers which may exceed a height of six (6) feet, nor the stacking of palletized small containers. The total volume of containers of wastes with free liquids will not be allowed to exceed that allowed by the secondary containment capacity.

Where applicable, inspection aisles of two (2) feet or more in width will be maintained in CMUs between adjacent rows of pallets of containers that hold less than 55 gallons.

The Waste Tracking System will provide a record of the location of each container of waste received at the facility, including those containers that are arranged or stacked in such a way that not all labels may be visible from the aisle. The Waste Tracking System will be updated at least once each day that containers of waste are moved.

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D-3c Waste and Container Compatibility: 40 CFR 264.172

Wastes accepted for storage, treatment, or other management are required to be compatible with the containers used to store them. Acceptable containers for acidic wastes may include those made of plastic, steel lined with plastic, or fiberglass. Acceptable containers for other wastes include, but are not limited to, steel, fiberglass, plastic, steel lined with plastic, and fiber drums and boxes, wooden cases, and fiber sacks. Solvent wastes are frequently stored in steel drums bearing DOT identification of 17 E or H. Alkaline wastes may be stored in plastic containers or containers manufactured from carbon steel. Fiber sacks may be used to store, among other materials, contaminated debris or soils. New types of containers are routinely being developed and approved by the United States Department of Transportation (USDOT); USDOT and Performance Oriented Packaging Standards will dictate the shipment in, and use of, alternate containers meeting regulated performance requirements. CHK may receive waste in any appropriate USDOT approved or performance specified container for management at the facility. Site-generated waste may be accumulated in specially designed containers specific to the plant process equipment.

D-3d Condition of Containers: 40 CFR 264.171

Facility personnel will inspect all containers for evidence of leakage, deterioration, or severe corrosion as part of the incoming load and unloading procedures at Clean Harbors Kansas,

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LLC. Containers are also routinely inspected while in storage. Inspection schedules are discussed in Section F, Inspection Plan. Containers exhibiting evidence of leakage, deterioration which would affect the structural integrity of the container, or severe corrosion will be transferred into overpacks, or containers in good condition, or the wastes may be transferred directly into tanks or treatment units. Open containers, improper storage in CMUs, and evidence of spills and leaks are among the focal points of inspections.

Transporters of Hazardous Waste are required to meet the specifications in the USDOT regulations in 49 CFR Part 178 Subparts A through J, 49 CFR 173 Subparts J through O, and the requirements of 49 CFR 172.101 with respect to design and use of containers. Changes in these and other regulations brought about by USDOT's Performance Oriented Packaging Standards will be observed, by CHK or generators sending shipments of waste to CHK, as they are made effective.

Any containers found to be inadequately or improperly identified or deficient in the required information may be staged in a holding area until the deficiency can be resolved.

D-3e Response to Leaks: 40 CFR 264.171

Because the secondary containment system is designed to prevent storm water run-on, liquids found on the floor of a CMU will be either blown precipitation or leaks of stored materials.

When an inspection reveals liquid within a contained area, the source will be identified if

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possible. If liquids are discovered, they will be removed within twenty-four (24) hours of detection, or as soon as practical. The identification of the origin of the liquid may be accomplished in a number of ways, using a variety of inspection techniques. Visual inspection of the condition of containers for localized staining or leakage adjacent to a particular container is the technique most likely to be employed to trace the source of a leak. If this measure fails, a sample of the liquid in the containment area will be analyzed for a range of parameters based upon the possible contents of the containers in the affected CMU. This process should indicate the waste stream type from which the leaking waste may have originated. All containers holding that waste stream type within the CMU will then be checked for leaks until the leak is found.

Wastes from the leaking container will be managed as described in D-3d. Liquid in the containment area may be transferred to an appropriate container, or to one or more storage tank(s), using a portable pump. Other suitable methods using absorbents, vacuum systems, etc., may also be used to manage spills. Any container into which wastes are transferred will be appropriately identified as to the type of waste stored in it. Minor quantities of liquids may be absorbed, collected, and placed in an appropriately identified container.

D-3f Special Requirements for Ignitable and Reactive Wastes: 40 CFR 264.176.

Ignitable and reactive wastes will be segregated from incompatible materials within CMUs.

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Segregation may involve placement in separate CMUs, or use of portable secondary containment units. Containers of ignitable or reactive wastes are stored at least fifty (50) feet from the facility property boundary. CMUs that may contain ignitable or reactive wastes include C100, C200, C400, C500, C600, C700, L100, P100, P200, D100, D200, D300, D400, I200, I300, I400, J100, J200, J300, J400, J500, J600, J700, and all but the west twenty-five (25) feet of I100. Because of the requirements of 40 CFR 264.176, ignitable or reactive wastes will not be stored in CMUs C300, B100, B200, B300, B400, and the west twenty-five (25) feet of I100. Measures to prevent accidental ignition of ignitable wastes include the prohibition of smoking, use of non-sparking tools, and enforcement of procedures to control burning and welding in areas where these wastes are stored. Section F, Inspection Plan, addresses these procedures in detail.

D-3g Special Requirements for Incompatible Wastes: 40 CFR 264.177.

During unloading procedures, the containers will be visually checked. Those containers selected for sampling and analysis will be opened and sampled as described in the WAP (see Section C, Waste Characterization). Sampling may occur on the unloading platform, in the working area, in a CMU, or prior to unloading, on the transport vehicle. Once samples have been obtained, the containers will be re-closed and will remain staged in accordance with the WAP until the incoming load procedures are completed. If incoming load procedures are not completed within 72 hours, the containers will be transferred into an appropriate CMU, as

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determined using available information (e.g., manifest, Waste Profile Sheet, etc.).

Containers that are not already in a CMU will be moved into a CMU after the incoming load procedures are completed or within 72 hours. Should a container of waste be determined to be incompatible with the other wastes stored in a CMU as a result of analysis, it will be segregated from incompatible wastes. Portable containment units may be used to facilitate segregation.

Each RCRA CMU is equipped with secondary containment. These containment systems have sufficient capacity to contain a minimum of ten (10) percent of the volume of the maximum container capacity of wastes with free liquids permitted for storage in that unit. Wastes that are incompatible may be stored in adjacent CMUs separated by either diking, building walls, or other device.

The seven (7) container storage buildings are subdivided into individually contained CMUs. Adjacent CMUs may be used to manage incompatible wastes. The CMUs are used interchangeably. The criteria for CMU selection for storage of a specific waste type is based upon considerations of chemical compatibility, storage unit capacity, and operational demands.

To ensure that residues from wastes previously stored in a CMU do not contact potentially incompatible wastes about to be placed in the CMU, the following procedure will be observed.

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The CMU will be visually inspected when containers are removed for compatibility service change, and will be cleaned if evidence of a spill is found prior to placement of the next waste into the CMU for storage.

CHK may transfer wastes from one container to another. In accordance with 40 CFR 264.177(b), hazardous waste will not be placed in an unwashed container that previously held an incompatible waste or material, except when that placement constitutes known and planned treatment as discussed in Section D-5, Treatment in Containers.

D-3h Transshipment of Containers of Waste:

The majority of wastes received at the CHK facility will be stored, processed, and shipped off-site. However, some wastes, primarily waste in drums, which are intended for treatment or direct disposal at off-site facilities, may be temporarily stored at CHK.

The facility may occasionally serve as a 10-day transfer station for wastes destined for incineration, disposal, or other management at another facility. This 10-day transfer will comply with the requirements of 40 CFR 263.12 and 264.1(g)(9). 10-day transfer stations are not subject to the permit requirements of 40 CFR 270 (see 40 CFR 270.1(c)(2)(vi)).

10-day transfer wastes may remain at the site for a period not to exceed ten (10) days prior to

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continuing the journey to the designated treatment, storage, or disposal site. 10-day transfer loads remain "in transit" during the entire stay at the site. These wastes may be off-loaded and transferred to another vehicle or to a railcar. Because these 10-day transfer loads are never accepted into the CHK waste management system, no analyses are performed on the loads. They will, however, be identified in the Waste Tracking System.

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D-4 Storage in Containers without Free Liquid: 40 CFR 264.175(c), 270.15(b).

CHK has made the assumption, for design purposes, that all containers of wastes managed at the CHK facility contain free liquid. Waste without free liquid is managed as appropriate for the waste code(s) carried. Management of containerized wastes without free liquids does not require containment (40 CFR 264.175(b)(3)); however, containers containing no free liquids may be managed in any container storage area on-site. Future operations may include storage areas without containment for exclusive storage of containers (including bulk containers) without free liquids.

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D-5 Treatment in Containers

CHK may perform controlled treatment in containers (e.g., neutralization, phase separation, blending, phase change, etc.) in any of the permitted CMUs at the facility. Containers will remain open only for as long as is necessary to ensure complete and safe treatment. In general, treatment in containers will involve the container being open for between one and four hours, although treatment in bulk containers may take as much as 24 hours.

Treatment in containers will involve the following steps:

- open the container;
- add materials or other wastes to serve as treatment reagents;
- mix the material in the container, as necessary;
- allow sufficient time for the reaction to be complete, and for any cooling, hardening, or other effects to occur as desired;
- observe the contents of the container and sample and analyze the treated mixture, as appropriate;
- if treatment is determined to be incomplete, repeat the four previous steps;
- when treatment is complete, close the container or transfer the contents to another container or tank.

Treatment in containers is performed to enable safer or more efficient handling of a waste or

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to prepare a waste for subsequent processing. Treatment in containers may result in elimination of hazardous characteristics. In the event that this results in removal of a waste code from a waste, CHK will use a Kansas certified laboratory to perform the analytical procedures.

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Appendix D-A

Container Storage Buildings

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Processing Area

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Figure D.5

Building C

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Appendix D-A Container Storage Buildings

Figure D.6

Drum Dock

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Figure D.7

Building B

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Figure D.8

Building I

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E-1 Introduction:

The purpose of this section is to provide information regarding the design, installation, and operation of the various tank systems at the Clean Harbors Kansas, LLC facility. This information is provided to fulfill the requirements of Kansas Administrative Regulations (KAR), Title 28, Article 31 as well as federal regulations as set forth in 40 CFR Part 264 Subpart J, and 40 CFR 270.16. The KAR incorporate, with few additions, the RCRA regulations contained in 40 CFR 260 through 270. Therefore, this section will refer only to the federal regulations.

A variety of tank systems are used at the Clean Harbors Kansas, LLC facility. Tanks are used to store and/or treat liquids, solids, and sludges. There are twenty-two (22) waste storage tanks with a total permitted capacity of 137,498 gallons at the facility. Individual tank capacities, dimensions, and tank system locations are summarized on Table E.1, Hazardous Waste Storage Tanks. Each of these tank systems is addressed in detail in the following pages.

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Table E.1 Hazardous Waste Storage Tanks				
VESSEL	CAPACITY - WORK (gal)	CAPACITY - MAX (gal)	DIMENSIONS*	LOCATION
V-1	7,181	7,363	8'0"x 26'7"V	Process Area
V-2	7,084	7,084	8'0"x 18'10"V	Process Area
V-3	7,181	7,363	8'0"x 26'7"V	Process Area
V-4	7,181	7,363	8'0"x 26'7"V	Process Area
V-5	20,895	20,895	12'0"x 25'7"V	Process Area
V-6	20,895	20,895	12'0"x 25'7"V	Process Area
V-7	7,181	7,363	8'0"x 26'7"V	Process Area
V-8	7,181	7,363	8'0"x 26'7"V	Process Area
V-9	5,078	5,078	6'0"x 24'0"H	Building D
V-10	5,078	5,078	6'0"x 24'0"H	Building D
V-11	5,078	5,078	6'0"x 24'0"H	Building D
V-12	5,078	5,078	6'0"x 24'0"H	Building D
V-13	5,078	5,078	6'0"x 24'0"H	Building D
V-14	5,078	5,078	6'0"x 24'0"H	Building D
V-15A	2,659	2,659	6'3"x 11'7"H	Building D
V-15B	2,659	2,659	6'3"x 11'7"H	Building D
V-15C	2,659	2,659	6'3"x 11'7"H	Building D
V-15D	2,659	2,659	6'3"x 11'7"H	Building D
V-16	9,028	9,028	8'0"x 24'0"H	Building D
V-17	522	522	3'4"x 8'0"H	Process Area
V-26	1,129	1,155	6'0"x 5'7"V	Process Area
TOTAL	136,562	137,498	N/A	N/A

*Dimensions are given in feet and inches. The first dimension is the tank diameter and the second dimension is the length, followed by a 'V' for vertical tanks or an 'H' for horizontal tanks.

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E-2 Description of Tank Systems: 40 CFR 270.16(a),(b),and(e), 264.192 (a)

The purpose of the following discussion is to describe the design and operation of the various tank systems at Clean Harbors Kansas, LLC. Certified tank assessments by an independent, qualified, registered, professional engineer as required by 40 CFR 264.192(a) are presented in Appendix E-A, Tank System Assessments and Certifications. Appendix E-A includes tank certification statements, tank containment certification statements, compatibility of wastes with tank materials, tank system field notes, and examples of containment coatings. Individual tank drawings are provided in Appendix E-B, Tank Drawings.

Figure E.1, Hazardous Waste Management Areas (Drawing 50-01-10-001, Hazardous Waste Management Areas in Section Y), indicates the general location of the tank management areas in relation to the other portions of the facility. Figure E.2, Tank Locations (Drawing 50-55-10-002, Tank Locations in Section Y), shows the location of the individual tanks within the tank management areas. Piping and instrumentation diagrams, and process flow diagrams are presented in Section N, Air Emissions.

RCRA hazardous waste, as well as a variety of non-hazardous wastes, may be managed in the different tank systems. A list of RCRA waste codes acceptable for storage or treatment in the tank systems are provided in Section A, Part A Permit Application. Any waste code listed in the Part A may be handled in any tank at the facility. In general, tanks V-1 through V-8, V-

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17, and V-26 are located within the Processing Area and have a total working capacity of 86,430 gallons. Materials stored or treated in these vessels are ignitable and non-ignitable, hazardous and nonhazardous liquids and sludges. Tanks V-9 through V-16, including V-15A through V-15D, are located within Building D and have a total working capacity of 50,132 gallons. Materials stored or treated in these vessels are non-ignitable, hazardous and nonhazardous liquids and sludges.

The secondary containment systems for Clean Harbors Kansas, LLC's tank systems are designed such that no external shell of any tank, nor any external metal component of a tank will be in contact with soil or standing water (i.e., sloped containment, elevated systems, etc.).

As a result of design criteria and operational procedures, the requirements of 40 CFR 264.192 (a)(3) (corrosion expert assessment) are not applicable. As required by 40 CFR 264.193 (c)(4), any accumulated precipitation in a secondary containment system will be removed within twenty-four (24) hours of detection, or in as timely a manner as possible.

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Figure E.1. Hazardous Waste Management Areas

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Figure E.2. Tank Locations

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**E-3 Operational Practices: 40 CFR 270.16(c),(i),(j), 264.194, 264.198, 264.199,
264.195**

The following information is supplied to meet the specific requirements of RCRA regarding tank operating practices.

E-3a General Operating Requirements: 40 CFR 270.16(i), 264.194

Any material that could cause the tank, ancillary equipment, or secondary containment systems to fail (i.e., rupture, leak, etc.) will not come into contact with the tank systems. Assessments for compatibilities of wastes with tank system materials are presented in Appendix E-A of this section.

Clean Harbors Kansas, LLC will use the appropriate controls and practices to prevent spills and overflows from tanks and containment systems. Spill prevention controls may include check valves, dry disconnect couplings, vacuum or gas purge, permanently fixed or mobile catch pans, and secondary containment around the activity. Overfill prevention controls include level sensing devices, high level alarms, an automatic pump activated by a float sensor, overfill bypass to another tank, and/or visual inspections during transfer. The control systems for the various tank systems are shown in the Piping and Instrument Diagram (P&ID)s provided in Section N, Air Emissions. Tank systems in hazardous waste service have, at a

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minimum, the following overflow protection systems:

- Secondary containment with chemical resistant coating,
- Automatic high level alarms on each individual tank, and
- Manual gauging ports.

Automatic level gauges are provided on some tanks and may be used in addition to the protection systems listed above. Adequate freeboard will be maintained in open top tanks to prevent liquids from blowing out of the top of the tank.

E-3b Description of Feed Systems, Safety Cutoff, Bypass Systems, and Pressure Controls: 40 CFR 270.16(c)

Descriptions of the feed systems, safety cutoffs, bypass systems, and pressure controls are provided below for the tank systems, additional information (including P&ID drawings) can be found in Section N, Air Emissions.

E-3b(1) Feed Systems, Safety Cutoff, and Bypass Systems:

Automatic and manual level detection systems on all tanks are monitored each operating day material transfer to or from tanks takes place. Valves and pipe manifold stations are used to control flow to and from tank systems. Some tank system piping also incorporates check

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valves for added flow control safety. Tank systems can be isolated (by valves) from waste flow. Refer to Section N, Air Emissions for detailed P&ID drawings showing piping and valves.

E-3b(2) Pressure Controls:

The tank systems at Clean Harbors Kansas, LLC have pressure and vacuum relief valves, or are vented to the atmosphere directly. Tanks V-1, V-3, V-4, V-7, and V-8 are low pressure tanks installed with pressure and vacuum relief valves set at approximately 14.5 pounds per square inch gauge (psig) pressure and approximately 0.5 ounce per square inch vacuum. In the event of a relief, these tanks are vented directly to the atmosphere. Tanks V-2, V-5, V-6, V-9 through V-14, V-15a through 15-d, V-16, and V-17 are closed top atmospheric tanks equipped with thief hatches with pressure relief set at approximately 2 ounces per square inch and vacuum relief set at 0.4 ounce per square inch. In the unlikely event of a relief, these tanks vent directly to the atmosphere. Tank V-26 is vented through a demister to the atmosphere, and tank V-18 is vented directly to the atmosphere.

As the newly proposed second phase of the air emission standards for hazardous waste facilities becomes final, Clean Harbors Kansas, LLC will address and implement appropriate air emission control devices for the affected tank systems.

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E-3c Special Requirements for Handling Incompatible, Ignitable, or Reactive Waste: 40 CFR 270.16(j), 264.198, 264.199, 264.17(b)

Proper precautions are and will be taken (when managing ignitable or reactive wastes, or mixing incompatible wastes or incompatible wastes and other materials) to prevent reactions which: 1) generate extreme heat or pressure, fire or explosion, or violent reactions; or 2) produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment. Wastes exhibiting the characteristics of reactivity will not be placed in any of the tank systems located at the CHK facility unless the waste is treated, otherwise managed, or mixed before or immediately after placement into a tank system so that:

- the resulting waste, mixture, or dissolved material no longer meets the definition of reactivity; or
- the waste is stored or treated such that it is protected from any material or conditions that may cause the waste to ignite or react; or
- the tank system is used solely for emergencies.

Tanks designated to accommodate storage of wastes exhibiting the characteristics of ignitability and reactivity will comply with the requirements for the maintenance of protective distances between the waste management area and any adjoining property lines as outlined in the National Fire Protection Association (NFPA) "Flammable and Combustible Liquids Code"

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(1977 or 1981). Water and/or foam fire suppression systems are also located where required by NFPA regulations. Smoking or open flames will not be permitted in the vicinity of these tank systems. "No Smoking" signs are conspicuously placed wherever there is a hazard from ignitable or reactive waste.

Incompatible wastes or incompatible waste and material will not be placed in the same tank system for storage. A compatibility analysis will determine whether a waste meets the compatibility criteria for storage in a tank system. The procedures for this analysis are outlined in Appendix C-A, Waste Analysis Plan (WAP) located in Section C, Waste Characteristics, and will be performed when necessary to ensure that incompatible wastes or incompatible waste and material are only placed in the same tank system under controlled circumstances. There may be instances where an incompatible waste is used as a reagent to treat another waste in a tank, under controlled circumstances. Additionally, hazardous waste will not be placed in a tank system that previously held an incompatible waste or material unless compliance with 40 CFR 264.17(b) is demonstrated. Certifications for Compatibilities of Wastes with Tank Materials are located in Appendix E-A.

E-3d Inspections: 40 CFR 264.195

A list of inspections performed for the various tank systems is provided in Section F,

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Inspection Plan. Clean Harbors Kansas, LLC will document the results of these inspections in the operating record to be kept at the facility for a minimum of three years.

E-3e Contingency Measures: 40 CFR 264.196

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, will immediately be removed from service and Clean Harbors Kansas, LLC will comply with the applicable requirements listed in 40 CFR 264.196. The Contingency/Emergency Plan (Section H), contains procedures for responding to a situation where there is a leaking or an unfit-for-use tank system.

E-3f Tank Cleaning for Non-Hazardous Waste Service

Tanks that have been in hazardous waste service are cleaned prior to non-hazardous waste service. This cleaning procedure will consist of the following steps:

- remove wastes from tank systems by draining and/or pumping;
- flush hoses and piping by pumping an appropriate detergent or solvent in a volume roughly equivalent to the total volume of the pipe or hose; and
- remove residuals by pumping, scraping, brushing, and/or washing, as necessary.

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When visual inspection of the tank shows no evidence of contamination, the tank system is considered to be available for non-hazardous waste or product service. The above procedures, while not intended to close a tank, will make it available for non-hazardous waste management.

In some circumstances, Clean Harbors Kansas, LLC may opt to store non-hazardous wastes in a tank that previously held hazardous wastes, without first cleaning that tank. Under these circumstances, Clean Harbors Kansas, LLC will manage the non-hazardous wastes as if they are hazardous, in accordance with the mixture rule (40 CFR 261.3(b)).

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E-4 Containment and Detection of Releases: 40 CFR 264.193, 270.16(g)

Secondary containment systems for tank systems are designed, installed, and operated to prevent migration of wastes or accumulated liquid to the soil or groundwater. The containment systems enable the detection of, and collection of, releases and accumulated liquids. Liquids accumulated in a CMU will be removed from containment systems within 24 hours or as soon as practicable.

Secondary containment systems for tank systems consist of concrete slabs surrounded with concrete walls or dikes of appropriate height. The containment systems are sloped or tanks are constructed above the floor to facilitate detection of any released material or other liquid. Accumulated liquids will be removed and managed appropriately. Each area has been designed to surround the base of the tanks and cover the surrounding earth most likely to come into contact with a release of waste. These design and operating factors are, in combination, capable of preventing potential lateral and vertical migration of hazardous waste constituents. The secondary containment systems have been designed to have sufficient structural strength and thickness to minimize the potential of failure owing to pressure gradients, physical contact with waste, climatic conditions, and the stress of daily operations. Additionally, the foundations will provide resistance to pressure gradients above and below the system, and will minimize the potential for failure due to settlement, compression, or uplift.

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Prior to placing a tank in hazardous waste service, the associated secondary containment system (slab, walls, dikes) will be coated with a sealant to protect the containment surface against chemical attack. The secondary containment systems consist of a liner (sealed concrete) that is free of cracks or gaps. Types of containment coatings previously used at Clean Harbors Kansas, LLC include Siloxirane, Sentry Polymers Semstone 245 or other Clean Harbors Kansas, LLC approved coatings that are effective against chemical attack and/or mechanical abuse. Appendix E-A contains secondary containment certifications for tank systems that are in service and coating specifications of the aforementioned coatings.

Tank system containment areas are inspected each operating day for the presence of liquids. Inspections will enable facility personnel to determine if failure of a tank or containment structure has occurred. Tank systems are either designed and constructed up and off the containment floor, provided with leak detection systems, or the containment area is sloped for ease of visually detecting leaks or spills. The design of tank system containment areas, in conjunction with facility inspections, facilitates the detection of accumulated liquids.

Accumulated liquids collected in the secondary containment system will be removed within 24 hours or soon as practical, and managed according to the procedures described in the WAP as outlined in Section C, Waste Characteristics.

Ancillary equipment (e.g., pumps) associated with the various tank systems are located within

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the tank systems' secondary containment areas, within secondary containment areas for pumps, or within the containment area of an associated loading/unloading area. Therefore, sufficient secondary containment is provided for the ancillary equipment. All piping utilized for transfer of hazardous waste to and from the various units is above-ground and is inspected each operating day for leaks or damage.

Tank system secondary containment areas have been designed to provide sufficient capacity to contain 100 percent of the capacity of the largest tank within their boundaries or 10 percent of the total capacity of tanks and containers, whichever is greater. Also, each containment area has been designed (e.g., with berms, building walls, storm sewer, etc.) and is operated in a manner to prevent run-on. Tank systems are provided with roofing to minimize infiltration of precipitation. Adequate containment is provided to manage the volume of incidental blown precipitation. Tank system secondary containment capacity calculations and certifications are provided in Appendix E-A. Containment capacities for areas containing tanks or tanks and containers, are summarized in Table E.2, Tank System Containment Details. As shown in the table, the containment capacity provided by each containment area is greater than the capacity required.

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Table E.2 Tank System Containment Details					
LOCATION	NUMBER OF TANKS & CONTAINERS & GALLONS EACH	CAPACITY REQUIRED (gallons) *	CAPACITY AVAILABLE (gallons) *	SECONDARY CONTAINME NT DESCRIPTIO N	GENERAL UTILIZATION
Building D D400	6 @ 5,078 4 @ 2,659 1 @ 9,028	9,028	9,195	Coated concrete curbs/slab inside a building	Storage of non- ignitable hazardous and nonhazardous liquids
Processing Area P100/P200	5 @ 7,181 1 @ 7,084 2 @ 20,895 1 @ 522 1 @ 1,129 180 @ 55	20,895	32,583	Coated concrete walls/slab under a roof	Storage of non- ignitable and ignitable hazardous and nonhazardous liquids

* Capacity calculations are provided in Appendix E-A

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E-5 Installation of Tank Systems: 40 CFR 270.16(f), 264.192(b)-(g)

Prior to placing any tank system in service, an independent registered professional engineer or qualified inspector will inspect for the presence of:

- Weld breaks,
- Punctures,
- Scrapes of protective coatings,
- Cracks,
- Corrosion, or
- Any other structural damage or inadequate construction/installation.

All such discrepancies will be remedied, and tank assessments in compliance with 40 CFR 264.192 will be performed, certified, and documented, prior to use. Appendix E-A provides Certified Tank Assessments, including secondary containment design and capacity calculations, compatibility assessments, and field notes. Appendix E-B provides drawings and construction specifications for the individual tanks.

Minor repairs (e.g., piping or valve replacement) will be performed at the facility and tightness tested before the tanks are returned to service. Tank systems will be removed from service when major repairs are required. The method of repair will depend upon the nature

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and extent of the defect. Major repairs may require that the tank be removed for repair and/or sent to the manufacturer for modifications. Tank systems requiring major repairs will be recertified by an independent professional engineer prior to being placed back into service.

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E-6 Closure: 40 CFR 264.197

Final facility closure (i.e., closure of all waste tanks on site) or partial closure of a selected tank system will be performed as outlined in Section J, Closure Plan.

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Appendix E-A

Tank System Assessments and Certifications

Attachment 1, Tank Certification Statements

Attachment 2, Tank Containment Certification Statements

Attachment 3, Compatibilities of Wastes with Tank Materials

Attachment 4, Tank System Field Notes

Attachment 5, Examples of Containment Coatings

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Appendix E-A - Tank System Assessments and Certifications

Attachment 1, Tank Certification Statements

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Attachment 2, Tank Containment Certification Statements

Throughout this Attachment, the facility referred
to as "Clean Harbors Kansas, LLC" is the same facility
identified in the permit application as "Clean Harbors Kansas, LLC."

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Attachment 3, Compatibilities of Wastes with Tank Materials

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Attachment 4, Tank System Field Notes

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Attachment 5, Examples of Containment Coatings

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APPENDIX E-C

YEAR OF INSTALLATION OF HAZARDOUS WASTE TANKS

<u>VESSEL</u>	<u>YEAR INSTALLED</u>	<u>VESSEL</u>	<u>YEAR INSTALLED</u>
V-1	1988	V-12	1966
V-2	1982	V-13	1966 ¹
V-3	1988	V-14	1966
V-4	1988	V-15A	1966
V-5	1988	V-15B	1966
V-6	1988	V-15C	1966
V-7	1988	V-15D	1966
V-8	1988	V-16	1966
V-9	1966	V-17	1990
V-10	1966		
V-11	1966	V-26	1991

¹ Note: Tank V-13 was closed in place in September, 1996. It is anticipated that a replacement tank will be installed in the future.

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Acronym Table

Clean Harbors Kansas, LLC (CHK)
Remedial Work Order (RWO)
Emergency Response Coordinator (ERC)
Container Management Unit (CMU)

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Inspection Plan**

F-1 Introduction:

Clean Harbors Kansas, LLC (CHK) has developed this Inspection Plan in compliance with 40 CFR 264.15 and 270.14; changes to the inspection plan will be made in accordance with permit modification procedures found in 40 CFR 270.42. It is intended to provide a systematic method of identifying potential problems, malfunctions, or deterioration that may cause or lead to a release of hazardous constituents to the environment or a threat to human health. Inspections will be used to identify potential operational problems, and to identify required maintenance of in-service equipment and structures while the facility is operational or equipment is in service. The corrective program will include a Remedial Work Order (RWO) system to document and track the resolution of problems identified during inspections.

One or more inspectors will be designated to perform the inspections as scheduled. A record of the inspections and the schedule will be maintained at the facility. The results of the inspections will be recorded on an Inspection Log that will be maintained in the operating record. The Inspection Log will include the date, the time of the inspection, the name of the inspector, his/her initials, items examined, problems noted, and the identifying number of each RWO issued to address any problem noted. The nature and date of any repairs are recorded on the RWO when the repairs are completed. The RWO is then filed by identifying number in the operating record.

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Potential problems identified on the inspection log will be corrected or addressed as soon as possible or practicable. If repairs are required, they will be made as soon as they can be safely and practically performed. If the problem identified is a threat to human health or the environment, then actions to mitigate the situation will be undertaken immediately. All steps necessary to allow the repairs (e.g., minimizing the exposure of the workers to hazardous materials, hazardous waste, or hazardous situations) will be taken prior to beginning the repair work. The inspection logs and RWOs will be maintained as part of the operating record for at least three years from the date of inspection. Examples of the inspection log are provided in Appendix F-A, Example of Inspection Log, and an example of the RWO is provided in Appendix F-B, Example of Remedial Work Order.

The facility inspector will communicate the occurrence of problems to the Operations Manager (or designee) through the RWOs. The timing of this notification will depend on the nature of the potential problem. A problem threatening human health or the environment would be reported immediately. If necessary, the inspector will notify the Emergency Response Coordinator (ERC) as required by Section H, Contingency/Emergency Plan.

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F-2 Inspection Requirements:

F-2a General Inspection Requirements: 40 CFR 264.15(a) and (b), 264.33, 270.14(b)(5)

Appendix F-C, General Inspection Schedule, will include inspection of the facility perimeter, safety and emergency equipment, security devices, operating and structural equipment, general requirements of miscellaneous units, communication systems, alarm systems, fire protection equipment, and decontamination equipment.

**F-2b Specific Process Inspection Requirements: 40 CFR 264.15(b)(4),
270.14(b)(5)**

Specific inspection schedules for container, tank systems, and miscellaneous units are provided in Appendix F-D, Inspection Schedule for Containers, Appendix F-E, Inspection Schedule for Tank Systems, and Appendix F-F, Inspection Schedule for Miscellaneous Units.

F-2b(1) Container/ Container Management Unit Inspection: 40 CFR 264.174

The Container Management Unit (CMU)s will be inspected for adequate aisle space, potential spills or accumulation of liquids into secondary containment systems and loading or unloading areas, and deterioration of secondary containment area structures.

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The containers will be visually inspected in accordance with Section C, Waste Characterization, for their condition (e.g., open, deteriorated, damaged, corroded, leaking, bulging such as may be caused by internal pressure build-up, etc.), and identification markings.

Refer to Section D, Use and Management of Containers, for a description of the CMUs. The inspection schedule for containers and container management units at the facility is presented in Appendix F-D, Inspection Schedule for Containers.

F-1b(2) Tank and Tank Systems Inspection: 40 CFR 264.193(i), 264.195

The items addressed by tank systems inspections include tanks, ancillary equipment, secondary containment systems, areas surrounding tank systems, tank overfilling control equipment, and other control or monitoring equipment. For example:

- The visible portions of the construction material of the tanks and their ancillary systems will be inspected for evidence of corrosion, deterioration, or erosion which could result in a leaking or unfit-for-use tank or tank system.
- The area immediately surrounding all tank systems including areas within the secondary containment systems will be inspected for obvious signs of deterioration,

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accumulated liquids, or potential releases of hazardous waste.

- Loading and unloading areas are inspected for obvious signs of deterioration, accumulated liquids, or potential releases of hazardous waste.
- Tank overfilling control and monitoring equipment is inspected visually or (periodically) for mechanical operation.
- The leak detection systems for the tanks are inspected for evidence of leakage, deterioration, or malfunction.

A list of the tanks and a description of the tank systems is provided in Section E, Tank Systems. Each of the tanks listed in Section E will be inspected for the applicable items listed above, according to Appendix F-E, Inspection Schedule for Tank Systems. Tank condition is assessed annually.

F-2b(3) Miscellaneous Units: 40 CFR 264.602

Inspection requirements for miscellaneous units include checks for releases, deterioration, or malfunction of each unit, and, as applicable, the unit's controls to prevent releases to the environment. These units are described in Section M, Other Regulated Units. Specific inspection items are addressed in Appendix F-F, Inspection Schedule for Miscellaneous Units.

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Inspections with respect to miscellaneous units will follow the same procedures as all other regulated units. The inspections will identify potential operational problems and required maintenance of in-service equipment and structures while the facility is operational or equipment is in service. The corrective program will include a Remedial Work Order (RWO) type of system to document and track the resolution of problems identified during inspections.

F-2b(4) RCRA Air Emissions Monitoring: 40 CFR 264, Subparts AA and BB

CHK currently operates no units subject to the Subpart AA requirements. Air emissions monitoring requirements for Subpart BB are discussed in Section N, Air Emissions.

Inspections required under Subpart BB are addressed in Appendix F-G, Inspection Schedule for RCRA Air Emissions Monitoring.

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F-3 Inspection Schedule: 40 CFR 264.15, 270.14(b)(5)

The inspection schedules presented in Appendices F-C through F-G indicate the inspection frequency for each item on the schedule. Inspection frequencies may range from daily to annually, depending upon the item. The frequencies have been based on the rate of probable deterioration of equipment, equipment manufacturers' recommendations, and operating experience at other Clean Harbors facilities. For example, areas within the facility subject to spills, such as truck loading and unloading areas, will be inspected daily when in use.

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Appendix F-A - Sample Inspection Log**

APPENDIX F-A

SAMPLE INSPECTION LOG

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APPENDIX F-B

SAMPLE REMEDIAL WORK ORDER

Form May be Modified

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Appendix F-C - General Facility Inspection schedule**

APPENDIX F-C

GENERAL FACILITY INSPECTION SCHEDULE

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 Appendix F-C - General Facility Inspection schedule

INSPECTION PARAMETER	INSPECTION PROCEDURE	INSPECTION FREQUENCY
General Facility and Perimeter	Visually check fences and gates for breaks or damage.	Monthly
	Visually check warning signs for clear visibility.	Monthly
	Visually check for erosion under fences.	Monthly
	Visually check access and intra-facility roads for spills.	Daily
	Visually check for vegetation obscuring warning signs along the fence.	Monthly
Safety and Emergency Equipment	Inspect tags of fire extinguishers for expiration dates and adequate pressure.	Monthly
	Test telephones for proper operation.	Monthly
	Test alarms for proper operation.	Monthly
	Test paging and loudspeaker systems for proper operation.	Monthly
	Inspect self-contained breathing apparatus (SCBA) for air pressure with a pressure gauge. Inspect regulators to verify that air passage is unobstructed. Visually check masks and hoses for serviceability.	Monthly

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INSPECTION PARAMETER	INSPECTION PROCEDURE	INSPECTION FREQUENCY
	Inspect first aid stations.	Monthly
	Inspect fire hydrants for adequate water supply, and leaks or evidence of corrosion.	Annually
	Visually inspect sprinkler systems and other fire suppression systems.	Monthly
	Inspect external condition of safety showers and operate to verify adequate water flow.	Monthly
	Inspect external condition of eye wash stations and operate to verify adequate water flow.	Monthly
	Inspect spill response and decontamination equipment for operable condition. Spill response equipment includes the following: Overpack drums Absorbents Portable pumps Hand tools Brooms Detergent Absorbent towels	Monthly
	Inspect inventory of Facility PPE for adequate supplies and operable condition. PPE includes the following:	Monthly

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<u>INSPECTION PARAMETER</u>	<u>INSPECTION PROCEDURE</u>	<u>INSPECTION FREQUENCY</u>
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	Cartridge respirators	
	Supplied air respirators	
	Protective clothing	
	Specialized gloves	
	Specialized footwear	
	Hearing protection	
	Eye protection	
	Hard hats	

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APPENDIX F-D

INSPECTION SCHEDULE FOR CONTAINERS

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Appendix F-D - Container, CMU Inspection Schedule

This schedule applies to active Container Management Units (CMUs) at CHK, except as noted.

INSPECTION PARAMETER	INSPECTION PROCEDURE	INSPECTION FREQUENCY
Container Management System	Inspect containment system loading and unloading areas for evidence of spills or accumulated liquids.	Daily
	Inspect aisles in container storage areas for a minimum of two (2) feet of aisle space.	Daily
	Visually inspect containers for evidence of pressure build-up, structural damage, leaks, missing cap or bung, corrosion, or deterioration.	Weekly
	Visually inspect containers for legible markings or identification labels.	Weekly
	Inspect the container storage areas, concrete slab, and curbs for cracks, gaps, flaking, chips, gouges, and other signs of wear.	Daily
	Inspect sumps for presence of liquids.	Daily
	Inspect container management areas to ensure incompatible wastes are properly segregated.	Weekly
	Inspect equipment and conveyors for operability, condition.	Weekly

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APPENDIX F-E

INSPECTION SCHEDULE FOR TANK SYSTEMS

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INSPECTION PARAMETER	INSPECTION PROCEDURE	INSPECTION FREQUENCY
Tank System:	Where appropriate, visually inspect the exterior condition of the tank (e.g. for evidence of leaks, stains, corrosion etc.) and the area immediately surrounding the externally accessible portion of the tank systems for erosion or evidence of releases of waste (e.g., wet spots, discolorations).	Daily
	Inspect tank containment system (concrete slab, sumps, and curbs) for cracks, gaps, flaking, chips, gouges, wet areas, puddles, and other signs of wear and leaking.	Daily
	Where appropriate, inspect monitoring equipment installed on the tanks for evidence of damage.	Weekly
	Inspect tank loading and unloading areas for evidence of spills. Inspect hoses for signs of wear, leakage or other damage. Inspect hose couplings for proper seals and leaks and other damage.	Daily
Overfill Control System	Check electronic indicator system for operability.	Daily
	Manually check operability of overfill floats.	Quarterly
Containment for: Truck Docks and Unloading area	Visually inspect for evidence of spills.	Daily

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INSPECTION PARAMETER	INSPECTION PROCEDURE	INSPECTION FREQUENCY
Sumps	Visually inspect for standing liquids.	Daily
	Visually inspect for cracks, gaps, or deterioration.	Weekly
Process Equipment (Conveyors, Valves, Feeders)	Visually inspect for corrosion, deterioration.	Daily
	Visually inspect to assure guards are in place.	Daily

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APPENDIX F-F

INSPECTION SCHEDULE FOR MISCELLANEOUS UNITS

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Appendix F-F - Other Regulated Units Inspection Schedule

INSPECTION PARAMETER	INSPECTION PROCEDURE	INSPECTION FREQUENCY
Miscellaneous Units	Check surface of unit for evidence of leaks or structural damage.	Daily, when in service
	Inspect the secondary containment, coating (where present), concrete slab, and curbs for cracks, gaps, flaking, chips, gouges, and other signs of wear.	Daily, when in service

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APPENDIX F-G

INSPECTION SCHEDULE FOR RCRA AIR EMISSIONS MONITORING

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INSPECTION PARAMETER	INSPECTION PROCEDURE	INSPECTION FREQUENCY
Pumps and Ancillary Equipment	Monitor for volatile air emissions as required.	Monthly and Annually
	Visually monitor as required for evidence of leaks.	Daily when in use

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List of Figures

Figure G.1, Facility Layout

List of Referenced Drawings

Drawings located in Section Y, Referenced Drawings

Drawing 50-01-01-002, Facility Layout

List of Acronyms

Clean Harbors Kansas, LLC (CHK)
Public Address (PA)
Hazardous Waste Management Unit (HWMU)
Container Management Unit (CMU)
Personal Protective Equipment (PPE)
Self-Contained Breathing Apparatus (SCBA)
National Fire Protection association (NFPA)

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G-1 Introduction

Waste management processes at Clean Harbors Kansas, LLC (CHK) are designed with safety features for protection of human health, the environment, and the general public. This section is a description of the measures used to prevent hazards during waste management at the facility. The hazardous waste units at the facility include storage tanks, container management units, loading and unloading facilities, and waste treatment equipment.

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G-2 ~~Security:~~ 40 CFR 264.14, 270.14(b)(4)

G-2a Security Procedures and Equipment:

The CHK facility will be secured to prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of the facility, to protect human health and the environment. (The active portion of the facility, hereinafter referred to in this section as "the facility," is as defined by 40 CFR 261.10.) This will be accomplished by provisions such as, fencing, gates, an electronically controlled security system, and warning signs. Presence of facility personnel during shift operations will minimize or prevent incidents of trespassing and vandalism. Fencing is not provided where buildings and building entrances provide a barrier to unauthorized entry. In addition, employees are instructed to question and direct unauthorized visitors to the office should they try to enter the facility. These security provisions are further discussed below.

- Fence: where required for security, the facility is surrounded by a six (6) foot high chain link fence with gates at various locations. Figure G.1, Facility Layout, Drawing 50-01-01-002, Facility Layout gives the location of fencing and gates. Entry into the facility will be controlled by the fencing, gates, and buildings. Gates and doors which allow access to the facility are to remain closed and secured against entry unless in use. Personnel and vehicle access will be controlled by an electronic system or by

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designated facility personnel.

- **Vehicle Access:** Vehicles must be authorized to enter the facility. Normal vehicle access is through the main entrance; this entrance is provided with electronic controls. However, when attended by facility personnel, other gates may be used with prior authorization. These secondary gates may also be used while evacuating the facility. In the event of a failure or scheduled shutdown of the electronic gate system, the main entrance gate will be operated manually. The operation of the secondary gates will not be affected by a power failure, since these gates will not be electronically controlled.
- **Personnel Access:** These procedures are designed to control unauthorized entry into the facility. Access into the facility will be controlled by the fencing, gates, buildings, and facility personnel. Non-employee personnel including contractors, consultants, governmental agency personnel and visitors will be required to sign in prior to being granted entry into the facility. Entry to the facility will be monitored by facility personnel.
- **Warning signs:** Warning signs will be posted on or adjacent to all gates. The signs, written in English, will state at a minimum, "DANGER - UNAUTHORIZED PERSONNEL KEEP OUT." The lettering on warning signs will be at least two (2) inches high to be legible from a distance of twenty-five (25) feet. The lettering and the

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sign background will be contrasting colors. Warning signs will also be placed along the fence and, where appropriate, along building exterior walls so as to be seen from any approach to the facility.

- Signs are posted inside the facility to warn personnel about potential hazards. These signs may be required, for example, by OSHA regulations (e.g., NO SMOKING, EYE PROTECTION REQUIRED, HEARING PROTECTION REQUIRED, DANGER - HIGH VOLTAGE, etc.). The signs will be located as appropriate.

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G-3 Inspection Schedule: 40 CFR 264.15, 264.33, 264.174, 270.14(b)(5)

CHK has developed an Inspection Plan to provide a systematic method of identifying potential problems, malfunctions, or deterioration which may cause or lead to a release of hazardous constituents to the environment or a threat to human health. The facility inspection plan, including inspection schedules, is presented in Section F, Inspection Plan.

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G-4 Preparedness and Prevention Requirements: 40 CFR 270.14(b)(6)

CHK is operated and maintained to minimize the possibility of hazards such as fire, explosion, or unplanned release of hazardous waste, etc. to air, soil, or surface water which may threaten human health or the environment. The inspection schedule for facility safety and emergency equipment is provided in Section F, Inspection Plan.

G-4a Equipment Requirements: 40 CFR 264.32

G-4a(1) Internal Communications: 40 CFR 264.32(a)

Communications inside CHK can be achieved through a telephone system and a Public Address (PA) system. Telephones will be located so that employees will have access to a phone. An employee will be able to call any other telephone in the facility, and can access the PA system for paging. The paging system will broadcast through a series of loudspeakers. Two way communication devices or paired work crews (i.e., the buddy system) will ensure that every employee has immediate access to communication in the event of an emergency. The internal communication system will be tested monthly, as indicated in the Inspection Plan, Section F. However, use of the internal communication system during the course of normal

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operations will more quickly identify developing problems.

An alarm system will alert personnel to major emergencies. Alarms will consist of a siren (activated at manual pull stations) or a broadcast over the paging system loudspeakers (activated by dialing the appropriate code at any telephone). Emergency telephone numbers and instructions are posted at or nearby every telephone in the active portion of the facility; emergency telephone numbers are also available in office areas.

G-4a(2) External Communications: 40 CFR 264.32(b)

External facility communications will be available through the local telephone company. Local (Wichita) or long distance telephone connections are available. Arrangements for emergency response have been made with appropriate outside agencies; see the Contingency/Emergency Plan, Section H.

G-4a(3) Emergency Equipment: 40 CFR 264.32(c)

Portable fire extinguishers, fire control equipment, spill control equipment, and decontamination equipment will be available at the facility. Descriptions, locations, and a list of emergency equipment for the facility are provided in Section H, Contingency Plan.

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Emergency equipment is inspected for availability and readiness according to the schedule given in Section F, Inspection Plan.

G-4a(4) Water for Fire Control: 40 CFR 264.32(d)

The facility has a supply of water available for fire fighting. Water for fire protection is supplied by a water main that is part of the City of Wichita public water system. Hazardous Waste Management Units (HWMU) are provided with appropriate fire protection systems meeting the applicable requirements of the City Building Code and NFPA. These systems are designed to extinguish or confine the spread and area of exposure of a fire. The systems may consist of fire hydrants, overhead sprinkler systems, or other types of fire protection systems.

A description of the fire protection equipment at Clean Harbors Kansas, LLC is included in Section H, Contingency Plan.

G-4b Aisle Space Requirement: 40 CFR 264.35

Container Management Unit (CMU)s will have access aisles maintained to allow hand held and portable emergency response equipment to be moved. Adequate aisle space is maintained to allow unobstructed movement of personnel, fire protection equipment, or spill control equipment; and is ensured by regular inspections, per the inspection schedule in Section F,

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Inspection Plan. Container management areas will have a minimum aisle space of two (2) feet as described in Section D. Sufficient aisle space will be provided within the tank storage areas to allow access in an emergency situation.

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G-5 Preventive Procedures, Structures, and Equipment: 40 CFR 270.14(b)(8)

Various structures have been constructed, safety features have been incorporated, and operating procedures have been developed, to minimize hazards to human health and the environment. Procedures, equipment, and structures utilized to prevent hazards are described in the following sections.

- A description of the Container Management Units is provided in Section D, Use and Management of Containers.
- A description of tank systems is provided in Section E, Tank Systems.
- A list of emergency equipment and a description of the emergency procedures are provided in the Contingency /Emergency Plan, Section H; a copy of this plan will be available at the facility at all times.
- Additional information regarding operating procedures are described in Section C, Waste Characterization, Section F, Inspection Plan, and Section I, Training Program.

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Appropriate material handling equipment and devices will be employed in the waste management areas. Applicable safeguards will be observed during repairs performed near ignitable materials (e.g., no smoking, no sparks, no open flames, etc.). Special precautions will be taken to prevent accidental ignition of ignitable wastes or the uncontrolled mixing of incompatible wastes (Refer to G-6 of this section).

G-5a Loading and Unloading Operations: 40 CFR 270.14(b)(8)(i)

Facility operations personnel receive training on proper loading and unloading procedures. This training will include instruction on machinery operation, safety equipment, waste identification, and processing procedures. A description of the personnel training plan (e.g., job-specific training) is provided in Section I, Training Program.

Various structures and equipment are utilized during loading and unloading operations to prevent environmental and health hazards. Container Management procedures are detailed in Section D, Use and Management of Containers.

Standard loading/unloading procedures are described below.

- Bulk Liquid Wastes: Prior to loading or unloading a bulk liquid container (e.g., a

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tanker truck) the operator will visually check valve position, that hoses are secured, and that any needed hose connection plugs and caps are in place. Following the loading or unloading of a bulk liquid container, the operator will visually check valve position, and that any needed hose connection plugs and caps are in place. Bulk metal containers holding ignitable liquid wastes will be grounded and bonded prior to loading or unloading.

- **Bulk Solid Wastes:** Many types of bulk solid and sludge containers will arrive by truck or rail. The containers may include sludge boxes, intermodal containers, end-dump trucks, etc. The contents of bulk containers of solids and sludge will be either directly unloaded into tanks or other containers, or the containers may be stored in CMUs prior to treatment or handling. At a minimum, two persons will be present during the waste loading/unloading operations.
- **Containerized Wastes:** Elevated docks are provided to facilitate loading and unloading of containerized wastes at the Drum Dock, and at Building J. Trucks are loaded or unloaded using an industrial truck or a drum dolly, or other appropriate container handling equipment. Containers are typically fifty-five (55) gallon drums, although larger and smaller containers may also be handled.

Manual handling of the containers will be minimized. Industrial trucks are capable of lifting and transporting one or more containers at a time. Drum grapplers (e.g., a semi-circular

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shaped arm attachment to the forks) or fork attachments for the forklift truck will be used for lifting and transporting individual containers. These drum grasping attachments are capable of securely holding a container during lifting and transporting without requiring additional straps or hooks. The operator is responsible for ensuring that the truck and the dock or ramp are properly aligned before any loading or unloading activities are initiated.

Drum dollies may be used to move individual containers (typically drums). The dollies have forks or a plate that can be inserted beneath the bottom of an individual container to support the container during lifting and transporting. The dollies either have a clip to secure the top of the container, or are shaped in an arc to cradle the container during lifting and transport. These drum dollies have features capable of holding a container during lifting and transporting without requiring additional straps. Some manual handling of the containers may be necessary.

G-5b Run-off and Run-on: 40 CFR 270.14(b)(8)(ii)

Precipitation and spills in waste management areas will be contained by dedicated secondary containment structures. These structures will prevent run-off to the environment or other facility areas. Secondary containment systems may contain one or more sumps to allow collection and removal of any accumulated liquids. Accumulated liquids will be managed in

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accordance with Section C, Waste Characterization. Containment systems not protected from precipitation by a building have been designed to accommodate the intrusion of precipitation from a twenty-five (25) year, twenty-four (24) hour storm event. Drawings showing the design and dimensions of containment systems are provided in Sections D, Use and Management of Containers and E, Tank Systems of this permit application.

Precipitation falling outside of the containment areas is controlled to prevent run-on of storm water into a waste management unit. Storm water falling into the active areas of the site is managed through a storm water drainage system. Spills of hazardous waste will be promptly controlled and removed, when discovered, to prevent the spread of contaminants. Spill response procedures are provided in Section H, Contingency/Emergency Plan. The spilled material and any absorbent used will be placed into appropriate containers. The waste will be managed in accordance with Section C, Waste Characterization.

G-5c Water Supplies: 40 CFR 270.14(b)(8)(iii)

Operations at CHK will require water for potable and process usage. Water supplies include City of Wichita water as well as ground water available on site. City (potable) water will be used for personnel decontamination (e.g., eye-wash stations, safety showers, and sanitary needs).

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Process water is used for waste treatment, equipment decontamination, fire fighting, etc. The process water will be supplied either from the City of Wichita distribution system or from ground water at the facility. Potable and process water are distributed, as needed, throughout the facility. Physical separation will be used to prevent contamination of the water in a delivery system by back-siphoning of contaminants.

G-5d Equipment and Power Failure: 40 CFR 270.14(b)(8)(iv)

Normally, the electrical requirements of CHK will be met with power purchased from the local power utility. There are no processes involving high pressures or reactions that, as a result of a power outage, might "run away" and cause fires, explosions, or other sudden releases of hazardous waste.

In the event of a power outage, facility personnel will proceed as follows.

- Cease operations
- Switch off process equipment
- Close appropriate valves
- Report to their supervisor(s) for further instructions

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G-5e Personal Protective Equipment: 40 CFR 270.14(b)(8)(v)

Personal Protective Equipment (PPE) available at the facility will include the following.

- Self-Contained Breathing Apparatus (SCBA): A portable device to supply breathing air will be available on-site.
- Cartridge respirator: Employees will be issued the appropriate mask and cartridges for the work area. Cartridges for the masks will be stocked at the facility.
- Supplied air: Buildings I and J will be equipped with a supplied air system to minimize the necessity for respirators in the container handling areas.
- Protective clothing: Employees performing specific tasks in HWMUs will be issued hard hats, protective coveralls, safety glasses, chemical resistant steel toe boots, specialized gloves, and hearing protection as appropriate. A supply of the appropriate protective clothing will be maintained at the facility.

Minimum PPE for all personnel within the active portion of the facility is a hard hat and eye protection. This minimum protection level will not apply to personnel within passenger

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vehicles, the administration building, control rooms, or any other office space within the facility in which the risk of a head or eye injury does not exceed normal office work risks. Personnel within specific waste management units will be provided with a hard hat, eye protection, and chemical resistant boots. Additional PPE will be provided as required for specific tasks.

Employees will be trained in proper PPE decontamination during their introductory training.

G-5f Prevention of Releases to Atmosphere: 40 CFR 270.14(b)(8)(vi)

The facility is designed, constructed, maintained, and operated to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment as required by 40 CFR 264.31.

The facility Inspection Plan (Section F), Emergency/Contingency Plan (Section H), and Training Plan (Section I) have been developed to enable the facility to prevent releases including emissions and to respond to any releases that may occur.

Waste management practices designed to minimize potential releases to the atmosphere include procedures as specified in 40 CFR 264.173. Containers remain closed during storage, except

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when it is necessary to add or remove waste or reagents. Containerized hazardous waste is managed in a manner that minimizes the potential for rupture of containers or damage to containers which could result in leakage. Ramps and automated transfer equipment facilitate safe movement of waste between management areas.

Tank and process unit management practices are designed to comply with the requirements of 40 CFR 264.194. Materials are not intentionally placed in a tank system or process unit if they could cause the unit to rupture, leak, corrode, or otherwise fail. Some of the process units are equipped with emission control devices, as discussed in Section M, Other Regulated Units. Tank systems deemed unfit for use will be removed from service as required by 264.196. Releases from tank systems or process units will be removed and/or cleaned up at the earliest practicable time to minimize potential for release to atmosphere by evaporation.

An emissions monitoring program for equipment subject to 40 CFR Subpart BB is in place at the facility. Details regarding this program presented in Section N (Air Emissions) of this application.

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G-6 Prevention of Reaction of Ignitable, Reactive and Incompatible Wastes:

G-6a Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Waste and Mixing of Incompatible Wastes: 40 CFR 264.17(a), 270.14(b)(9)

Precautions will be taken at the facility during storage, treatment, or handling to avoid the accidental ignition or reaction of waste and mixing of incompatible wastes. These precautions are intended to prevent generation of undesirable heat, pressure, fire, explosion, toxic gases, or fumes which could result in damage to the structural integrity of any portion of the facility or cause a threat to human health or the environment. The precautions will include the following.

- Ignitable waste will be protected from open ignition sources such as open flames, metal welding and cutting, hot surfaces, frictional heat, smoking, and sparks (static, electrical, or mechanical). Tanks storing ignitable wastes will be grounded to protect the contents from ignition by a spark. Bulk metal containers (tank trailers and transport tanks) of ignitable liquid wastes will also be grounded and bonded before and during transfer of material through pipes or hoses. Signs prohibiting smoking will be conspicuously placed within and near the ignitable waste storage areas. Applicable safeguards (e.g., no smoking, no sparks) will be observed during repairs performed near ignitable materials.

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- Buildings which enclose waste processing operations will be ventilated appropriately to avoid an accumulation of hazardous mists, vapors, dusts, or gases; or of flammable vapors or gases.
- Ignitable and reactive wastes are stored at least fifty (50) feet away from the facility boundary.

G-6b Management of Ignitable or Reactive Wastes in Containers: 40 CFR 264.176, 270.15(c)

Ignitable or reactive wastes in containers may be either solid, sludge, or liquid. Ignitable or reactive wastes in containers will be managed in accordance with the following guidelines.

- Ignitable or reactive wastes are protected from spontaneous ignition caused by heat-producing chemical reactions by segregating incompatible wastes in separate CMUs. Segregated secondary containment will prevent mixing of incompatible wastes.
- The buildings have been designed to comply with the City Building Code and the appropriate codes of the National Fire Protection Association (NFPA). Interior and exterior walls of the CMUs meet the requirements of the applicable Building Code and NFPA codes. Equipment and personnel access doors meet the applicable codes.

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- Containerized ignitable or reactive liquid wastes may be decanted and transferred to a storage tank for blending or processing through the Processing Area, re-containerized for shipment, treated in containers, or shipped off-site in their original containers.

Section G-6d provides information on the management of ignitable and reactive wastes in tanks.

G-6c Management of Incompatible Wastes in Containers: 40 CFR 264.177, 270.15(d)

Measures to prevent the inadvertent mixing or commingling of incompatible wastes in containers will include the following:

- Incompatibility between wastes or a waste and a container will be determined in accordance with Section C, Waste Characterization.
- Containers of waste received within one truck trailer will be unloaded and managed as described in Section C, Waste Characterization. If, during incoming load analysis, incompatible wastes in a common CMU are identified, the containers holding the incompatible waste will be removed and placed in an appropriate area or provided with a portable containment system. Section D, Use and Management of Containers provides a description of the container storage and processing procedures.

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- Wastes found to be incompatible under the procedures in Section C will not be placed in the same container except under controlled circumstances during treatment. Wastes added to containers must be compatible with the container itself.

G-6d Management of Ignitable or Reactive Wastes in Tanks: 40 CFR 264.198, 270.16(j)

Proper precautions are and will be taken (when managing ignitable or reactive wastes) to prevent reactions which: 1) generate extreme heat or pressure, fire or explosion, or violent reactions; and 2) produce uncontrolled toxic mists, fumes, dusts, gases in sufficient quantities to threaten human health or the environment. Wastes exhibiting the characteristic of reactivity will not be placed in any of the tank systems located at the CHK facility unless the waste is treated, otherwise managed, or mixed before or immediately after placement into a tank system.

Reactive wastes will be stored in tanks or containers in such a way that they are protected from materials or conditions that might produce a dangerous or unacceptable reaction.

Liquid wastes which exhibit the characteristics of ignitability will be placed in appropriate tanks or containers for storage and/or treatment at the facility. Section E, Tank Systems,

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provides details regarding hazard management in tanks. All ignitable wastes will be stored more than fifty feet from the CHK property boundary.

G-6e Management of Incompatible Wastes in Tanks: 40 CFR 264.199, 270.16(j)

Proper precautions are and will be taken (when managing incompatible wastes, or mixing incompatible wastes or incompatible wastes and other materials) to prevent reactions which:

- 1) generate extreme heat or pressure, fire or explosion, or violent reactions; and 2) produce uncontrolled toxic mists, fumes, dusts, gases in sufficient quantities to threaten human health or the environment. Measures to prevent the inadvertent mixing or commingling of incompatible wastes in tanks will include the following:

- Compatibility will be determined in accordance with Section C, Waste Characterization.
- Incompatible wastes will not be placed in the same tank unless the waste is treated, otherwise managed, or mixed before or immediately after placement into a tank system.

The characterization of waste for compatibility is determined according to Section C, Waste Characterization. If waste is added to a contaminated, empty tank, the waste must be compatible with the previous contents of the tank.

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- If waste is to be placed in a tank that previously held a waste with which it would be incompatible, then the decontamination procedures in Section C, Waste Characterization will be followed.

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**G-7 Air Emission Standards for Equipment Leaks: 40 CFR 264.1050 - 264.1065,
270.25**

Fugitive emissions from equipment associated with management of hazardous waste contacting or containing ten (10) percent by weight of organics are regulated under Subpart BB of Part 264. Details regarding these requirements are addressed in Section N, Air Emissions.

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Appendix G-A - Sample Inspection Log Sheet**

APPENDIX G-A

SAMPLE INSPECTION LOG SHEET

Form May be Modified

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Acronym Table

Clean Harbors Kansas, LLC (CHK)
Emergency Response Coordinator (ERC)
City of Wichita Fire Department (CWFD)
Hazardous Materials Response Team (HMRT)
City of Wichita Police Department (CWPD)
National Response Center (NRC)
Reportable Quantity (RQ)
Local Emergency Planning Committee (LEPC)
Kansas Department of Health and Environment (KDHE)
National Fire Protection Association (NFPA)
Personal Protective Equipment (PPE)
Self-Contained Breathing Equipment (SCBA)

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H-1 Introduction:

This Contingency/Emergency plan, when implemented, will minimize hazards to human health and the environment due to events such as fires, explosions, and/or releases of hazardous waste. This plan contains provisions addressing the requirements of 40 CFR Part 270 and 40 CFR Part 264. It is presented in a format designed to be useful for employees and response personnel during an emergency and for employee training purposes.

Copies of the plan will be kept at the facility and provided to the appropriate local authorities and emergency response agencies that may be called upon to provide emergency services. Amendment of the Emergency/Contingency Plan will be performed in accordance with the permit modification requirements of 40 CFR 270.42.

The plan will be reviewed and may be amended, if necessary, whenever:

- the permit is revised;
- the plan may be improved by addressing shortcomings noted during practice or actual implementation;

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- the list of Emergency Response Coordinators (ERC) changes, or the list of emergency equipment changes;
- the facility changes in a way that materially increases the potential for fires, explosions, releases of hazardous waste or hazardous waste constituents; or
- the facility changes in a way that affects the implementation of the plan.

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H-2 General Information: 40 CFR 264.52, 264.53

H-2a Facility name:

Clean Harbors Kansas, LLC

H-2b Owner and Operator of Facility:

H-2b(1) Facility Operator:

Clean Harbors Kansas, LLC
2549 North New York Avenue
Wichita, Kansas 67219

H-2b(2) Facility Owner(s):

Clean Harbors Kansas, LLC
2549 North New York Avenue
Wichita, Kansas 67219

H-2b(3) Facility Telephone Number:

Office: 316/269-7400

Note: See Table H-1 for telephone numbers for Emergency Response

Coordinators.

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H-2c Location:

The facility is located at 2549 North New York Avenue in Wichita, Sedgwick County, Kansas, ZIP code 67219.

This address is in the Northeast quarter of the Southeast quarter of Section 4, Township 27 South, Range 1 East.

H-2d Layout and Site Plan:

See Figure H.1, Emergency Equipment/Evacuation Routes, Drawing 50-01-03-002.

Note: Full size reference drawings are available for review from the facility, and are included in Section Y of the Part B permit application, Referenced Drawings.

H-2e Description of Facility Operations:

CHK treats, recovers for recycling, and stores for subsequent off-site disposal, hazardous and nonhazardous wastes. Detailed operating and design descriptions are presented in the facility RCRA Permit Application (Parts A and B), which is available

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for review at the facility. Appendix H-A, List of EPA Waste Codes identifies RCRA regulated wastes which may be present in the facility. All RCRA regulated storage areas and treatment equipment will have secondary containment structures, which provide adequate run-on and run-off controls.

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Figure H.1. Emergency Equipment/Evacuation Routes

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H-3 Emergency Response Coordinators: 40 CFR 264.52(d), 264.55

The Emergency Response Coordinator (ERC) will be responsible for implementing the Contingency/Emergency plan as necessary in the event of an exigent situation. Each of the personnel listed in Table H-1, Emergency Response Coordinators, are qualified to assume the responsibilities of ERC. Each ERC will be familiar with all aspects of the facility's Contingency/Emergency Plan, operations and activities at the facility, the location and nature of wastes handled, the location of records within the facility, and the facility layout. An attempt will be made to contact the primary ERC in the event of an exigency; if the primary ERC is not available, the alternate ERC(s) will be called until one is reached.

The personnel listed in Table H-1, Emergency Response Coordinators, have full authority to commit all facility resources necessary to carry out the Contingency/Emergency Plan. A letter providing authorization for action by an ERC is provided in Appendix H-B, Emergency Response Coordinator Authorization.

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Table H-1

Emergency Response Coordinators

Primary Emergency Response Coordinator

Name: Brian Key

Work: 316-269-7400

Alternate Emergency Response Coordinator

Ex. 6 PII

Matt Noble

Work: 316-269-7400

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H-4 Implementation:

This Plan will be implemented in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or waste constituents that may threaten human health and the environment. The ERC will be contacted if a fire, explosion, or release of hazardous waste might warrant implementation of this Plan. The ERC will determine whether implementation of the Contingency/Emergency Plan is necessary. Minor events which do not meet these criteria may be resolved with due regard to personnel health and safety without implementation of this plan. The following types of situations may be justification for implementing this plan.

H-4a Fires and/or Explosions:

- Fire that may cause harm to human health.
- Fire that may cause release of toxic fumes.
- Fire that may spread and could possibly ignite other nearby materials, either on-site or off-site, or could cause heat-induced explosions.
- Use of fire suppressants that could result in contaminated run-off.

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- Explosion which has or could:
 - result in danger from flying fragments or shock waves
 - ignite other hazardous waste at the facility
 - release toxic fumes.

H-4b Material Releases:

- A release of toxic vapors or a significant volume of flammable liquids or vapors that could present a fire or vapor explosion hazard.
- A release that could result in off-site soil contamination and/or surface water contamination.
- A release that could endanger human health or the environment for other reasons.

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H-5 Emergency Response Procedures:

H-5a Notification Procedures: 40 CFR 264.56(a)(2), 264.56(d)

In the event of an emergency which may require notification of outside authorities, the ERC or person designated by the ERC, shall call the appropriate emergency authorities; the KDHE will be notified within 24 hours or in as timely a manner as is possible of any events that result in implementation of this Emergency/Contingency Plan.

A telephone listing of these authorities is provided in Appendix H-C, Emergency Telephone List of Local Authorities. This telephone list will be posted at or nearby every telephone in the active portion of the facility; emergency telephone numbers are also available in office areas. The person initiating the call will provide as much of the following information as is available.

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- Name of caller
- Name of facility and telephone number
- Address and location of Facility
- Time and type of incident
- Type and quantity of material(s) involved
- Extent of injuries
- Possible hazards to health and environment outside the facility

The specific authorities to be notified are as follows.

- The Sedgwick County Emergency Medical Service (EMS) will be called to respond to injuries to personnel as needed. Arrangements to treat personnel injuries have been made with Via Christi (St. Francis) Emergency Center.
- In the event of a fire, explosion, or major spill, the City of Wichita Fire Department (CWFD) will be notified as needed. Arrangements have been made with the CWFD Hazardous Materials Response Team (HMRT); the HMRT is prepared to respond to a fire, explosion, or major spill at the CHK facility.

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- Similarly, for situations which may require response from the local police (i.e., evacuation), the City of Wichita Police Department (CWPD) will be notified. If the CWPD officials determine that additional assistance is needed, they may contact the Sedgwick County Sheriff, and/or the Kansas Highway Patrol.

In the event that the ERC determines that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility, the appropriate local emergency authorities will be notified. The ERC will be available to assist authorities in evaluating the situation regarding potential evacuation of an area outside of the facility. In addition, the National Response Center (NRC) will be notified in the event of a release of a Reportable Quantity (RQ) within a twenty-four (24) hour period.

If there is evidence of a Section 304 RQ release off site, the Local Emergency Planning Committee (LEPC) will be notified in accordance with said section of the Emergency Planning and Community Right-to-Know Act of 1986 (40 CFR 355).

The Kansas Department of Health and Environment (KDHE) will be notified of incidents through reporting as specified in Section H-9.

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H-5b Identification of Hazardous Materials: 40 CFR 264.56(b)

Whenever there is a release, fire, or explosion that may threaten human health or the environment, the ERC will immediately attempt to determine the character, exact source, amount, and areal extent of any released materials. Facility records, manifests, truck placards, etc. may be reviewed or inspected in an effort to identify the waste that may be involved in an exigent situation. A chemical analysis may be performed as necessary.

H-5c Hazard Assessment: 40 CFR 264.56(c)

The ERC will assess possible hazards to human health or the environment that may result from the release, fire or explosion. This assessment will consider both direct and indirect effects of the release, fire, or explosion, including:

- the possible effects of any toxic, irritating, or asphyxiating gases that are generated,

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- the possibility of fire spreading to other areas or causing a heat induced explosion,
- the risk to which facility personnel might be exposed by attempting to control a fire or release,
- the effects of any hazardous surface water run-off from water or chemical agents used to fight fires, and
- the potential of contaminating surface water or ground water from a spill or release of hazardous material.

The ERC will utilize available information to make this assessment, including the quantity of hazardous material involved, the rate of release, and the conditions surrounding the incident.

H-5d Control Procedures: 40 CFR 264.52(a), 264.56

In the event of an emergency, the necessary provisions of this Contingency/Emergency plan will be carried out as described below.

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The person who first discovers the incident, if it is safe to do so, will:

- evacuate injured personnel,
- Notify the Emergency Response Coordinator,
- stop the spread of contamination (e.g., turn off a valve on a tank),
- begin primary containment of liquids (i.e., dikes, sumps),
- order the evacuation of other personnel from the area surrounding the incident,
if necessary.

Once the ERC has been notified and is on the scene, he/she will then assess the situation further with the information that is available at this time. The ERC will immediately implement, as necessary, the following provisions of this Contingency/Emergency Plan (if not previously implemented).

- Activate internal facility alarms or communication systems to notify all facility personnel of the incident.
- Identify the character, exact source, amount, and areal extent of any released material, if possible.

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- Assess the possible hazards to human health or the environment. If the assessment indicates that there is a threat to human health or the environment outside the facility, or if there is evidence of a release of a RQ of hazardous material outside the facility, the ERC will implement the notification provisions of this Contingency/Emergency Plan per 40 CFR 264.56(d).
- Coordinate the evacuation of personnel from immediate danger and coordinate first aid for injured personnel.

After the initial assessment is completed, the ERC will also, as necessary, implement the following procedures.

- Coordinate the appropriate response procedures according to the incident.
These procedures are presented in H-5e.
- Initiate remedial actions to reduce the impact of the incident, as appropriate.
- Ensure that any waste generated during clean up is properly managed, and that no waste that may be incompatible with the released material is managed at the affected unit until the cleanup procedures are completed.

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Additional responses may be warranted depending on the type of incident. The response procedures outlined in H-5e include the items that the ERC will consider in determining additional responses. This Plan serves as a guide rather than an unyielding set of procedures. The ERC will consider all options presented in this Plan and implement them as appropriate.

H-5e Emergency Response Procedures: 40 CFR 264.56

H-5e(1) Injuries to Personnel:

The following response actions are to be considered in the event that an injury occurs at the facility.

- Based on the assessment of hazards to health which may be present, and if it is safe to do so, evacuate injured personnel from immediate danger using appropriate Personal Protective Equipment (PPE).
- Perform CPR or artificial respiration, if needed, on the injured.
- Notify Sedgwick County EMS according to notification procedures in Section H-5a.

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- Wash eyes, skin, etc. of injured personnel with water, if needed.
- Treat injuries (see Figure H.2 for the location of first aid stations).
- Establish emergency operations center.
- Notify emergency operations center of incoming injured.
- Dispatch site personnel to meet and direct incoming emergency vehicles.

H-5e(2) Fires/Explosions:

During an emergency, the ERC will take all reasonable measures necessary to ensure that fires and explosions do not occur, recur, or spread to other hazardous waste at the facility.

The following response actions are to be considered if a fire and/or explosion should occur at the facility.

- Establish an emergency operations center.
- Extinguish any fire with fire extinguishers, if appropriate.
- Call the Wichita Fire Department HMRT.
- Evacuate site according to evacuation procedures in H-8.

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- Notify Derby refinery and Union Pacific in the event of an evacuation.
- Contact appropriate local agencies (see H-5 for notification procedures). The telephone list is posted at or near telephones or is available in office areas.
- Notify the KDHE.
- Notify the National Response Center (NRC).
- Dispatch site personnel to meet and direct incoming emergency vehicles.
- Use water spray to cool tanks and containers that are exposed to heat as a result of the fire and/or explosion.
- Protect other operations and vehicles from the incident. This includes, where applicable, stopping processes and operations, collecting and containing released wastes, removing or isolating containers, or moving vehicles.
- Monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment.
- Stop the release of liquid by plugging, patching, or unloading any leaking tanks, pipes, or other equipment.
- Absorb liquid waste with absorbent materials and place in containers for management. Alternatively, larger spills can be pumped into containers or tanks.

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H-5e(3) Releases:

During an emergency, the ERC will take all reasonable measures necessary to ensure that releases do not occur or recur. The following list contains response procedures to be considered in the event that a release of hazardous waste occurs.

- Evacuate immediate area around incident.
- Attempt to contain spills, if it is safe to do so.
- Transfer leaking or ruptured container(s) to an overpack.
- Establish emergency operations center.
- Determine the source of spill/release and shut down the affected unit to eliminate additional material release.
- Stop additional release of material to the environment and control surface leakage (e.g., pump the spilled material to tanks, transfer contents of tank to another tank, build containment dikes, transfer released materials to containers).
- Clean up the spill using on-site equipment. As appropriate, these procedures will include soaking up liquid with absorbants; removal of standing liquids and/or waste from sumps, trenches, or low points of the floor; removal of material adhering to the surface; and steam cleaning and/or a water rinse.

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- If on-site personnel cannot contain/cleanup spill, contact appropriate state and local agencies (see Section H-5a for notification procedures).
- Contact the Wichita Fire Department Hazardous Materials Response Team (HMRT) for RQ spills. The telephone list is posted next to all phones or in all offices in the facility (see Appendix H-C for phone numbers).
- Evacuate the facility (see H-8 for evacuation procedures and routes).
- Within twenty-four (24) hours, or as soon as practicable after detection of the release, transfer sufficient waste from the tank or container, as necessary, to prevent further release of hazardous waste to the environment and to allow inspection of the unit. Any tank system from which there has been a leak or spill, or which is unfit for use, will be emptied and removed from service in accordance with 40 CFR 264.196.
- After the release is controlled, and it is deemed safe to do so, response personnel will enter the affected building or area to assess damage and to determine the condition of waste containers, and other affected equipment.
- Stop the release of liquid into an area by plugging, patching, or unloading any leaking tanks, pipes, or other equipment.
- Stop the release of liquid from its container by placing the leaking container into an overpack drum.

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After an emergency, the ERC will initiate clean-up activities including the treatment, storage, and/or disposal of recovered waste, contaminated soil or surface water, or other material that results from a release, fire, or explosion at the facility.

H-5f Post-Emergency Activities: 40 CFR 264.56(h)(2), (i)

When operations of a waste management unit have been suspended due to an emergency resulting in implementation of this Plan, the unit and all equipment that was used in implementing the Plan will be assessed. Emergency equipment used in response to the emergency must be determined to be fit for reuse or replaced. The Regional Administrator (Region VII) and the KDHE will be notified (per 40 CFR 264.56) when the equipment is fit for use, prior to resuming operation of the affected unit.

The following actions will be considered when decontaminating emergency equipment.

- Provide adequate safety equipment and protective clothing for CHK personnel involved in remedial actions.

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- After a fire, explosion, or spill event is controlled and it is deemed safe to do so, enter the affected building or area to assess damage and determine the condition of waste containers, tanks, and other affected equipment.
- Utilize on-site equipment for remedial actions (see H-6 for list of on-site equipment).
- The Tanker Bay in the Processing Area may be used to decontaminate vehicles and equipment (i.e., trucks, portable pumps, etc.). The rinsate will be collected and managed as a hazardous waste.
- Reusable PPE will be decontaminated, as appropriate. PPE which is unsuitable for reuse will be managed for disposal.
- Inspect the affected unit(s) and ensure that no waste that is incompatible with the released material is managed in the unit(s) until cleanup procedures are completed.
- Note in the operating record the time, date, and details of any incident that required implementing the contingency plan.
- Submit, from CHK or the ERC, a written report of the incident to the Secretary within 15 days after the incident (see H-9 for the detailed reporting requirements).

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- Submit, from CHK or the ERC, a written report to the Secretary certifying that any emergency equipment involved in the incident or in the response and remediation are fit for their intended use.

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H-6 Emergency Equipment:

Emergency equipment is available at the facility for response to emergency situations.

Emergency equipment maintained on site is summarized in Table H-2, Emergency Equipment List. This equipment will be accessible and will be regularly inspected and appropriately serviced. A description of this equipment is listed below.

H-6a Emergency Alarm and Communication Systems:

The facility is equipped with emergency alarm and communication systems to be used to notify and give emergency directions to both on-site and off-site personnel. These systems include:

- a facility-wide alarm system (siren), which is capable of alerting personnel of emergencies;
- a PA system which includes an intercom system accessible by telephones throughout the facility; and
- telephones, which are the primary means of communication within the facility and between the facility and the local emergency authorities.

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**Table H-2
Emergency Equipment List**

Equipment	Capabilities
Fire Extinguishers	Small fire control
Foam Supply	Fire control
Portable Sump Pump	Collection of spills/leaks
SCBA/Respirators	Minimize exposure of personnel
Personal Protective Equipment	Minimize exposure of personnel
Air Compressor	Supplied air line
Containers/Overpacks	Storage of collected material
Absorbants	Spill control
Squeegee, Shovel	Spill collection/containment
Portable P.A. System	Communication

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H-6b Fire extinguishers:

There are fire extinguishers located throughout the facility as required by the appropriate local fire code as well as the National Fire Protection Association (NFPA) code. The facility employs Type ABC fire extinguishers which are multipurpose combinations of the extinguisher types listed below.

- Type A is capable of extinguishing fires involving ordinary combustible wastes such as wood, cloth, paper, rubber, and many plastics.
- Type B is capable of extinguishing fires involving flammable liquids, oils, greases, tars, oil base paints, lacquers, and flammable gases.
- Type C is capable of extinguishing fires involving energized electrical equipment.

In Buildings I and J, small containers of dry powder fire extinguisher will be kept on hand in any area where open containers are handled (i.e., Areas I300 and J200). In addition, Buildings I and J will be provided with a foam fire suppression system instead of the water sprinklers provided in other areas of the plant.

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H-6c Fire hydrants:

Fire hydrants are available for fire control. They receive their water supply from the City of Wichita Department of Water.

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H-6d First Aid Stations:

Cabinets of first aid and medical supplies such as bandages, tape, antibacterial ointments, pain relievers, splints, local and topical anesthetics and eyewash bottles and solution are located throughout the facility (see Figure H.1 for first aid station locations).

H-6e Personal Protective Equipment (PPE):

The PPE listed below is available to facility personnel; PPE is issued as appropriate.

- Chemically resistant garments
- Chemically resistant gloves
- Chemically resistant boots
- Coveralls
- Steel-toed boots
- Hard hats
- Face shields and protective eyeglasses
- Air purifying respirators
- Self-contained air supply (as described below)

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H-6f Safety Showers and Eye Wash Stations:

There are two (2) stations located in the facility. They are designed to meet OSHA requirements. Locations for these stations are provided on Figure H.1, Emergency Equipment/Evacuation Routes.

H-6g Self-Contained Breathing Apparatus (SCBA):

SCBAs are available to provide breathing air, which may be needed by some personnel in the event of an emergency situation. Supplied air will be provided in Buildings I and J.

H-6h Other Emergency Response Equipment:

- Portable Pumps - Pumps that handle liquids and sludges are available for recovering any released contaminants.
- Stabilizing agents - Stabilizing materials will be stored in Building B to assist in spill release containment and cleanup.

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- Overpack drums - Overpack drums will be available in each Container Storage Building where containerized hazardous waste is stored. Leaking drums may be placed inside these overpack drums for containment.
- Site Equipment - Mobile equipment may be used to respond to hazardous waste releases. Facility equipment typically maintained includes industrial trucks (forklifts) and a multi-purpose vehicle (Bobcat).

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H-7 Coordination Agreements: 40 CFR 264.52(c), 264.37

H-7a Emergency Authorities:

Coordination agreements with local emergency authorities have been negotiated; letters to these authorities are presented in Appendix H-D, Coordination Agreement Letters in compliance with 40 CFR 264.37. Copies of this plan will be submitted to the organizations identified in Appendix H-D; amendments to the plan will be forwarded to these authorities as required. Procedures for notification of emergency authorities are described in Section H-5a.

H-7b Local Contractors:

In the event that on-site cleanup of a spill or release is required, CHK has limited equipment on-site to respond. Outside contractors may be used as needed to respond to a spill or release. In addition, Clean Harbors has a Remedial Services Division that is capable of responding to hazardous waste spills and/or releases.

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H-8 Evacuation Plan: 40 CFR 264.52(f)

In each exigent situation, the ERC will determine whether a facility evacuation is necessary to protect the health and safety of facility personnel. The following criteria will be considered in making this decision.

H-8a Criteria for Evacuation:

- Fire and/or explosion that releases vapors or fumes which will endanger the health of facility personnel.
- Fire and/or explosion that could ignite other hazardous wastes and, in turn, endanger facility personnel.
- Spill and/or release that releases vapors or fumes that will endanger the health of facility personnel.

If the ERC determines that a site evacuation is necessary, the following procedures will be followed to implement the evacuation.

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- The ERC or person designated by the ERC shall activate the appropriate alarms/sirens indicating that a site evacuation is required. If the alarm/siren system is not functioning, the intercom system will be used.
- All facility personnel shall meet at the appropriate evacuation point(s).
- The ERC or person(s) designated by the ERC will perform a count of all personnel at the evacuation point(s).
- If any persons are not accounted for, the ERC will coordinate efforts to search the appropriate areas to locate the missing personnel.
- Personnel shall evacuate the site according to the evacuation routes shown on Figure H.1. All personnel will be informed of these procedures and routes in their initial training program.

Personnel may return to the site when allowed to do so by the ERC.

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H-9 Required Reports: 40 CFR 264.56(j)

H-9a Reports to the Secretary:

If the Contingency Plan is implemented per 40 CFR 264.51(b), CHK will submit a written report to the Secretary within 15 days after the incident in compliance with 40 CFR 264.56(j).

The report will include the following information.

- Name, address, and telephone number of the owner or operator
- Name, address, and telephone number of the facility
- Date, time, and type of incident (e.g., fire, explosion)
- Name and quantity of material(s) involved
- The extent of injuries, if any
- An assessment of actual or potential hazards to human health or the environment, where this is applicable
- Estimated quantity and disposition of recovered material that resulted from the incident
- Notification that the equipment used in response to the incident is fit for its intended use

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H-9b SARA Reporting:

As soon as practicable after a release which requires notice under the Superfund Amendments and Reauthorization Act (SARA), CHK or the ERC will provide a written report to the LEPC as required by regulations set forth under that Act.

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Appendix H-A - Emergency Response Coordinator Authorization**

Appendix H-A

Emergency Response Coordinator Authorization

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Appendix H-B - Emergency Telephone Listing of Local Authorities**

Appendix H-B

Emergency Telephone Listing of Local Authorities

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Appendix H-B - Emergency Telephone Listing of Local Authorities**

Emergency Telephone Listing of Local Authorities

**Clean Harbors Kansas, LLC
2549 North New York Avenue
Wichita, Kansas, 67219**

Office Telephone No.: 316-269-7400

Agency	Office Telephone	Emergency Telephone
Sedgwick Co. EMS	316/383-7994	911
St. Francis Emergency Center	316/268-5052	316/268-5052
Wichita Fire Dept.	316/268-4451	911
WFD HazMat Team	316/838-8655	911
Wichita Police Dept.	316/268-4239	911
KDHE	785/296-1079	785/296-0614
EPA Region VII	913/281-0991	913/281-0991
National Response Center (NRC)	800/424-8802	800/424-8802
Derby Refinery After 5:00 PM	316/262-5703	
Union Pacific	316/268-9433	

Ex. 6 PII

Note: See Table H-1 for list of ERCs.

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Appendix H-D - Coordination Agreement Letters**

Appendix H-C

Coordination Agreement Letters

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Appendix I-B, Introductory Training Seminar Outline
Appendix I-C, Example Introductory Training Seminar Test
Appendix I-D, Job-Specific Training Topics (Examples)

List of Acronyms

Clean Harbors Kansas, LLC (CHK)
Health, Safety and Training Manager (HSTM)
Material Safety Data Sheets (MSDS)

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I-1 Outline of Training Program: 40 CFR 270.14(b)(12) and 270.16

This training program has been developed in accordance with the regulatory requirements of 40 CFR Parts 270 and 264. The program is designed to provide the information needed by Clean Harbors Kansas, LLC(CHK) personnel to assist them in understanding the processes and materials with which they are working and the potential safety and health hazards associated with those processes and materials. The training program also facilitates instruction of facility personnel in the proper procedures for preventing and reacting effectively to emergency situations. Where appropriate, the training program provides information regarding inspection, repair, and replacement of facility emergency equipment.

The goal of the training program is to train personnel to perform their job functions in an efficient and safe manner, and in compliance with applicable regulations and permit requirements.

I-1a Job Titles and Duties: 40 CFR 264.16(d)(1), (2) and (3)

As required in 40 CFR 264.16, records at the facility will include:

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- the job titles for positions at the facility related to hazardous waste management,
- the names of the employees filling these jobs,
- a description of these jobs including duties, and
- a description of the minimum qualifications for employees filling these jobs.

The following are job titles that are most relevant to the compliant operation of CHK

- Facility Manager
- Operations Manager
- Laboratory Manager/Senior Chemist
- Laboratory Technician
- Facility Inspector
- Health, Safety and Training Manager
- Operator
- Operator Helper
- Secretary/clerk

Examples of typical job descriptions are contained in Appendix I-A, Typical Job Descriptions,

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Duties, and Training. These job descriptions include a summary of the duties, qualifications, and training for the job titles listed above.

I-1b Training Content, Frequency and Techniques: 40 CFR 264.16(a)(3), 264.16(c) and 264.16(d)(3)

Initial training of facility employees will consist of:

- 24 hours of safety training as described by 29 CFR 1910.120(p)(7), for operations personnel,
- an introductory training seminar, and
- job specific training.

Each employee must complete the introductory training seminar prior to working without direct supervision in any hazardous waste management area at the facility. The introductory training seminar will last approximately sixteen (16) hours. The topics covered during this seminar include facility specific items such as the Contingency/Emergency Plan, as well as basic training in general topics such as chemistry and occupational safety. An outline of the seminar is provided in Appendix I-B, Introductory Training Seminar Outline. After

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completion of the introductory training seminar, the employees will be tested to evaluate their comprehension of the information presented. An example of the type of test employees may be given is provided in Appendix I-C, Example Introductory Training Seminar Test.

In addition to the introductory training seminar, employees will be provided with job-specific training such as on-the-job training. The type and content of the job-specific training will depend on the skills and level of expertise demanded by the job. Appendix I-D, Typical Job-Specific Training Topics includes a list of typical topics for job-specific training that will be provided to the appropriate employees. The job-specific training completes the employee's initial training. Employees will not be allowed to perform unsupervised, hazardous waste management duties prior to completion of initial training.

Continuing training will be provided for employees performing certain jobs after the employee completes the initial training. At a minimum, the continuing training will consist of an annual review of the introductory training seminar.

Training techniques will vary depending on the subject. Typically, training techniques may involve classroom lecture, on-the-job, and audio/visual demonstration. Training instructors

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will include personnel who have experience and/or training in that area and outside instructors such as manufacturer's representatives. On-the-job training is conducted by qualified facility personnel.

I-1c Director of the Training Program: 40 CFR 264.16(a)(2)

The Health, Safety and Training Manager (HSTM) will administer the training program. The duties and qualifications of the HSTM are provided in Appendix I-A. The duties of the HSTM include maintaining records that demonstrate that personnel are receiving the appropriate training in accordance with the training program. The minimum qualifications for the HSTM will be a college degree and/or equivalent experience with a knowledge of regulatory and safety requirements. The HSTM will be trained in hazardous waste management procedures.

I-1d Relevance of Training to Job Position: 40 CFR 264.16(a)(2)

It is important that employees be trained and possess a knowledge of the concepts required to perform their duties. Each employee engaged in hazardous waste management activities must be able to act correctly and safely while fulfilling job responsibilities.

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In addition to the introductory training seminar that all employees will attend, relevant job-specific training will be provided to appropriate employees. For example, if an employee is in a supervisory or management position requiring an understanding of the Kansas rules for the management of hazardous waste, then the employee is trained accordingly. The job descriptions contained in Appendix I-A include examples of job-specific training that are relevant to the position. Appendix I-D contains outlines of typical topics for job-specific training.

I-1e Training for Emergency Action/Response: 40 CFR 264.16(a)(3)

The introductory training seminar includes training on the Contingency/Emergency Plan. Emergency action procedures are included in the Contingency/Emergency Plan. In accordance with 29 CFR 1910.120(p)(8) and CHK's Contingency/Emergency Plan, the facility may evacuate employees in the event of an emergency, and may not have a specially trained Emergency Response Team. The training topics provided during the seminar regarding the Contingency/Emergency Plan are provided in Appendix I-B. The seminar is designed to train employees to act appropriately during emergency situations.

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In addition to the introductory training seminar, appropriate employees will receive job-specific training on emergency procedures, equipment, and systems. Where applicable, this job-specific training will include:

- waste identification;
- waste processing procedures;
- instruction on machinery operation;
- procedures for the shutdown of operations;
- instruction on safety equipment;
- procedures for using, inspecting, repairing, and replacing facility emergency equipment;
- procedures for using the communications or alarm systems;
- procedures for fires or explosions; and
- procedures for incidents of potential soil or ground-water contamination.

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I-2 Implementation of Training Program: 40 CFR 264.16(b), 264.16(d)(4) and 264.16(e)

The HSTM will monitor the training program to ensure that all employees complete their initial training and an annual review of the introductory training seminar. The initial training must be completed within six (6) months of either:

- initial employment,
- assignment to CHK if the individual is employed by Clean Harbors at the time of the assignment (unless equivalent training was received in his/her previous assignment), or
- transfer to a new position within the facility, if the employee has not previously received the appropriate training.

In the last two (2) cases, the employee will only be required to receive instruction in those portions of the initial training for which the employee has not yet been trained. For example, an employee who transfers from one position to another within CHK will not be required to repeat the introductory training seminar or any job-specific training the employee has already completed.

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Records of the training provided to employees as part of the training program will be maintained at the facility and on a corporate supported database. These training records will include:

- date of training,
- training topics,
- instructor's name,
- employees in attendance, and
- any test results, if appropriate.

Training records for current employees will be maintained until closure of the facility.

Training records for former employees will be maintained for at least three (3) years from the date the employee last worked at the facility. Employee training records may accompany personnel transferred to CHK from another facility operated by Clean Harbors.

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APPENDIX I-A

**JOB DESCRIPTIONS, DUTIES AND TRAINING
(EXAMPLES)**

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JOB TITLE:

Facility Manager

JOB DESCRIPTION AND DUTIES:

Responsible for the safe and efficient management of operations at the facility. Approves the development of all records and manuals at the facility. Responsible for the enforcement of facility safety programs. Coordinates all facility operations with corporate office.

QUALIFICATIONS:

College degree and substantial experience in hazardous waste management. Knowledge of State and Federal Regulations dealing with hazardous waste management.

TRAINING:

Introductory training seminar, safety training, technical training, hazardous waste management training.

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JOB TITLE:

Operations Manager

JOB DESCRIPTION AND DUTIES:

Responsible for the management of facility operations. Coordinates all material handling operations in the facility. Responsible for the enforcement of all safety programs. Assists in formulating all records and manuals at the facility. Assumes management of the facility as required.

QUALIFICATIONS:

College degree and/or experience in hazardous waste management operations including regulations.

TRAINING:

Introductory training seminar, operations training, safety training, technical training, hazardous waste management training.

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JOB TITLE:

Laboratory Manager/Senior Chemist

JOB DESCRIPTION AND DUTIES:

Responsible for the routine operation of the laboratory including organizing and maintaining all laboratory records. Supervises technical employees to insure that all analyses are performed correctly and in a timely manner. Responsible for the analysis of incoming waste samples and designating the appropriate treatment and disposal for them. Participates in environmental monitoring as needed.

QUALIFICATIONS:

Degree in Chemistry or Physical Science which included a minimum of sixteen (16) hours of chemistry. A knowledge of chemistry and general laboratory experience such as would be acquired by four (4) years of academic study in the field of chemistry supplemented by at least three (3) years experience performing hands-on analytical laboratory chemistry work.

TRAINING:

Introductory training seminar, safety training, technical training, hazardous waste management training.

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JOB TITLE: Laboratory Technician

JOB DESCRIPTION AND DUTIES: Responsible for the routine operation of the laboratory under the direction of the Senior Chemist. Performs analysis on pre-shipment samples. Assists in determining the designation of treatment and disposal of customer waste. Responsible for assisting in maintaining all laboratory records and inventory. Responsible for the collection and analysis of environmental samples.

QUALIFICATIONS: Two (2) years college including a minimum of thirteen (13) college credit hours of chemistry plus other science related courses or a minimum of two (2) years laboratory experience.

TRAINING: Introductory Training, First Aid and CPR, Continued Safety Training, Technical Training.

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JOB TITLE:

Facility Inspector

JOB DESCRIPTION AND DUTIES:

Responsible for the timely and effective completion of all facility inspections. Maintains tank gauging records and all other regulatory inspection records for the facility.

QUALIFICATIONS:

One (1) year's experience in hazardous waste disposal operations.

TRAINING:

Introductory training seminar, operations training, safety training.

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JOB TITLE: Health, Safety and Training Manager

JOB DESCRIPTION AND DUTIES: Formulates and implements facility Health and Safety Programs. Ensures that personal protection equipment is available for facility employees. Responsible for routine inspections of facility safety equipment. Responsible for the formulation of the facility Training Program. Responsible for keeping records of Health, Safety, and Training Programs that demonstrate compliance with Federal and State regulations.

QUALIFICATIONS: College degree and/or equivalent experience working with State and Federal regulations, including OSHA regulations.

TRAINING: Introductory training seminar, operations training, safety training, technical training, hazardous waste management training.

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JOB TITLE:

Operator

JOB DESCRIPTION AND DUTIES:

Responsible for the assignment and effective completion of all field activities during a shift. Coordinates operations with area supervisors. Assists in the enforcement of company policy and safety regulations.

QUALIFICATIONS:

A minimum of one (1) year experience in industrial waste operation, including basic chemistry knowledge.

TRAINING:

Introductory training seminar, operations training, safety training.

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JOB TITLE:

Operator Helper

JOB DESCRIPTION AND DUTIES:

Responsible for the effective and safe completion of all assigned facility operations under the direction of the Operations Manager and/or Operator.

QUALIFICATIONS:

Equipment/process experience preferred.

TRAINING:

Introductory training seminar, operations training, safety training.

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JOB TITLE: Secretary/clerk

JOB DESCRIPTION AND DUTIES: Responsible for administrative support activities such as typing, answering the phone, filing and recordkeeping.

QUALIFICATIONS: High school diploma or equivalent with office experience.

TRAINING: Introductory training seminar.

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Appendix I-B - Introductory Training Seminar Outline**

APPENDIX I-B

EXAMPLE INTRODUCTORY-TRAINING SEMINAR OUTLINE

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Appendix I-B - Introductory Training Seminar Outline

INTRODUCTORY-TRAINING SEMINAR OUTLINE

I. ORIENTATION: (2 hours)

1. Introduction
2. New Employee Communication Checklist
3. Company History
4. Facility Tour

II. REVIEW OF OPERATIONS: (4 hours)

1. General Facility Description
2. Contingency Plan
 - Contingency plan implementation procedures
 - Access and use of communication and alarm systems
 - Response to fires, explosions, spills and/or releases
 - Site evacuation procedures

III. CHEMICAL TRAINING: (2 hours)

Basic understanding of the characteristics of acids, caustics, and solvents

1. Basic Chemistry
2. Incompatible Wastes

IV. SAFETY TRAINING: (4 hours)

Facility safety requirements and emergency equipment including location and capabilities

1. Facility Housekeeping
2. Job Specific Safety Equipment
3. Eye & Face Safety

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Appendix I-B - Introductory Training Seminar Outline

- Equipment location, inspection, repair and operation
- 4. Respiratory Protection
 - Equipment location, inspection, repair and operation
- 5. Emergency Equipment
 - Equipment location, inspection, repair and operation

V. INTRODUCTORY JOB-SPECIFIC TRAINING: (RCRA) (4 hours)

- 1. Office Procedures - (Clerical & Technical Personnel)
 - Telecommunication System
 - Load Arrival Procedures
 - Filing System
 - Log Maintenance
- 2. Technical Training - (Laboratory and Supervisory Personnel)
 - Office Procedures
 - Load Arrival Procedures
 - Truck Sampling Procedures
- 3. Operational Training - (Operations Personnel)
 - Review Job Description
 - Truck Unloading Procedures
 - Equipment Operation

VI. Clean Harbors INITIAL TRAINING TEST: (RCRA) (30 minutes)
See Appendix I-C for example test

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Appendix I-C - Example Introductory Training Seminar Test**

APPENDIX I-C

EXAMPLE INTRODUCTORY TRAINING SEMINAR TEST

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Appendix I-C - Example Introductory Training Seminar Test**

EXAMPLE INTRODUCTORY TRAINING SEMINAR TEST

- 1) What safety gear is required for general facility activities?
- 2) Who is responsible for facility housekeeping and why?
- 3) When and where should you wear eye protection?
- 4) When is it necessary to wear a face shield?
- 5) What areas are designated for "SMOKING"?
- 6) How do you gain access to the loud speaker system?
- 7) What is the "EMERGENCY NOTIFICATION LIST"?
- 8) Where are the "EYEWASH STATIONS" in your work area and how do they operate?
- 9) When and why should you have respiratory protection?
- 10) What are some of the dangers associated with acids?
- 11) Can "fumes" be dangerous to your health?
- 12) What is a Contingency Plan and where is it located?
- 13) What are the two kinds of "EMERGENCY ALARMS"?
- 14) What is the proper procedure for reporting a fire?
- 15) Where are the gathering points in case of an evacuation?
- 16) Name the location of a fire extinguisher in your work area?

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Appendix I-C - Example Introductory Training Seminar Test

- 17) What is the "BUDDY SYSTEM" and why is it used?
- 18) What is the best defense against injury?

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Section I
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Appendix I-D, Typical Job-Specific Training Topics**

**APPENDIX I-D
JOB-SPECIFIC TRAINING TOPICS
(EXAMPLES)**

**Clean Harbors Kansas, LLC
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Appendix I-D, Typical Job-Specific Training Topics**

TYPICAL JOB-SPECIFIC TRAINING TOPICS

OPERATIONS TRAINING:

Site Security

Security procedures and equipment

Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment

Preparedness and Prevention

Access to and use of internal communications and alarm systems

Access to and use of telephone for summoning off-site help

Access to and use of portable fire extinguishers, spill control equipment, and decontamination equipment

Access to and use of firewater system

Shut down of operations

Contingency/Emergency Plan

Contingency/Emergency Plan implementation procedures

Access and use of communications and alarm systems

Response to fires, explosions, spills, groundwater contamination, and air emissions

Site evacuation procedures

Job-specific use and maintenance of emergency equipment

Hazard Communication Manual

Right-to-Know

Material Safety Data Sheets (MSDS)

Tank Operation and Controls

Site procedures and 40 CFR Part 264, Subpart J

Use and Management of Containers

Site procedures and 40 CFR Part 264, Subpart I

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Appendix I-D, Typical Job-Specific Training Topics

SAFETY TRAINING:

Industrial Hygiene and Decontamination Procedures and policies for decontamination

Protective Equipment
Job-specific Protective Equipment

First Aid - General Information
Wound and burn management

Care in Handling Waste
Procedures for safety in handling and treating wastes

Loading and Unloading of Trucks
Site procedures for trucks

Specialized Equipment Operation
Procedures for operation and maintenance of heavy equipment

Basic Chemistry
Safety in handling chemicals

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Appendix I-D, Typical Job-Specific Training Topics

TECHNICAL TRAINING:

Updating of Waste Stream Approvals
Customer profile updates

Manifest Systems
Proper manifest preparation

Records
Site-specific records system

Sampling and Approval Procedures
Procedure for sampling trucks properly and waste stream approval

Waste Identification and Segregation
Procedures for identifying and handling incompatible materials

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Appendix I-D, Typical Job-Specific Training Topics**

HAZARDOUS WASTE MANAGEMENT TRAINING

Overview of RCRA hazardous waste management regulations

Proper characterization and identification of hazardous wastes

Land Disposal Restrictions

Overview of DOT hazardous waste management regulations

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Acronym Table

Clean Harbors Kansas, LLC (CHK)
Treatment, Storage, or Disposal Facilities (TSDFs)
Title 40 of the Code of Federal Regulations (40 CFR)
Hazardous Waste Management Units (HWMUs)
National Priorities List (NPL)
Potentially Responsible Party (PRP)
Kansas Department of Health and Environment (KDHE)
Toxic Characteristic Leaching Procedure (TCLP)
Container Management Unit (CMU)
Toxic Characteristic Leaching Procedure (TCLP)

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J-1 Introduction

This plan describes the activities to be performed at Clean Harbors Kansas, LLC at the time of facility closure; it addresses both partial unit closures and final facility closure. This plan is contained in the RCRA/HSWA Part B permit application as Section J.

The facility stores, treats, and recovers for recycling hazardous and nonhazardous wastes.

Clean Harbors Kansas, LLC blends BTU containing materials for beneficial use and energy recovery as cement kiln fuel and recovers solvents for further management. CHK also stores, processes, and/or manages waste solvents, sludges, solids, and water for subsequent shipment to other permitted Treatment, Storage, or Disposal Facilities (TSDFs) for distillation, beneficial reuse, further treatment or disposal. Clean Harbors Kansas, LLC also stores waste solvent, hydrocarbons, paint-related waste streams, solids, corrosive waste streams, and water-based waste streams. Storage and treatment occurs in both containers and tanks. (For a more complete description of activities at Clean Harbors Kansas, LLC, see Section B, Facility Description.) The facility operates under EPA I.D. No. KSD007246846.

The Clean Harbors Kansas, LLC facility does not include disposal units. Also, all tank systems are equipped with secondary containment meeting the requirements of Title 40 of the Code of Federal Regulations (40 CFR) 264.193 (b) through (f). Therefore, the facility is subject to neither the post-closure care requirements of 40 CFR 264.116 through 264.120, nor the contingent post-closure plan requirements of 40 CFR 264.197(c).

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J-2 Hazardous Waste Management Units to be Closed

The Clean Harbors Kansas, LLC facility's existing hazardous waste management units are summarized in Table J.1, Maximum Extent of Operations - Clean Harbors Kansas, LLC - Hazardous Waste Management Units, presented in Appendix J-A, Tables. Specific descriptions of container management units, tank systems, and miscellaneous units are located in Sections D (Container Management), E (Tank Management), and M (Miscellaneous Units), respectively.

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J-3 Closure Performance Standard

Clean Harbors Kansas, LLC will close each hazardous waste management unit and/or the entire facility in a manner that minimizes the need for further maintenance, and controls, minimizes, or eliminates (to the extent necessary to protect human health and the environment) post-closure escape of hazardous waste, hazardous constituents, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere.

Clean Harbors Kansas, LLC will meet this performance standard by removing all hazardous wastes and hazardous waste constituents to acceptable levels (see Section J-4a). All containers, tanks, miscellaneous units, piping, and other ancillary parts to the systems will be closed in one of the following ways:

1. They will be dismantled and disposed of as hazardous waste at a RCRA/HSWA permitted off-site disposal facility.
2. They will be decontaminated in accordance with the procedures discussed in Section J-4a and disposed of at a solid waste landfill.
3. They will be decontaminated sufficiently to be salvaged for future use.

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4. They will be transferred for use at another RCRA facility.

All permanent structures (e.g., concrete containment systems) will be closed in one of the following ways.

1. They will be dismantled and disposed of as hazardous waste at a RCRA/HSWA permitted off-site disposal facility.
2. They will be decontaminated in accordance with the procedures discussed in Section J-4a and disposed of at a solid waste landfill.
3. They will be decontaminated in accordance with the procedures discussed in Section J-4a and maintained in place for future use.

All analyses performed to verify that closure performance standards are met shall be performed at a laboratory certified by the state of Kansas for the specific analytical procedures used.

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J-3a Establishment of Cleanup Standards

Clean Harbors Kansas, LLC will close the subject Hazardous Waste Management Units (HWMUs) by removal of the waste so that there will not be any need for post-closure monitoring and maintenance of the units.

Since all units at Clean Harbors Kansas, LLC have secondary containment, any leaks, spills, drips, etc. will have been contained, removed, and cleaned up in accordance with the operating conditions of this permit. Therefore, the surrounding soils and/or groundwater should not have been contaminated by regulated units during facility operations under this permit application.

The property on which the Clean Harbors Kansas, LLC facility is located is included within the boundaries of the 29th and Mead Comprehensive Environmental Response, Compensation, and Liability Act or "Superfund" Site in Wichita, Kansas. The 29th and Mead Superfund Site is listed on the National Priorities List (NPL). Reid Supply Company has been named a Potentially Responsible Party (PRP) in the 29th and Mead Superfund Site. In 1986, Conservation Services, Inc. purchased certain assets, including the permit (operating under EPA I.D. #KSD007246846), from Reid Supply Co., Inc. Subsequently, Hydrocarbon Recyclers, Inc. of Wichita acquired the capital stock of Conservation Services, Inc. in 1987. The Reid Supply Company property functioned as a storage, recycling, and collection point

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for hazardous waste material and as a bulk chemical repackaging and distribution center since the 1970s.¹

The 29th and Mead Superfund Site, located in north Wichita, Kansas, is bounded by 37th Street on the north, I-135 on the east, 17th Street on the south, and Broadway Street on the west. Located in a heavy industrial area, the Site has evolved over a 95 year time span, approximately. Current industry includes, but is not limited to, chemical supply companies, grain elevators, railroad facilities, metal fabricating companies, foundries, refineries, meat processing companies, recyclers/salvage facilities, roofing companies, concrete companies, food processing companies, and gasoline retailers.¹

Past investigations, including one performed by Groundwater Technology, Inc.¹, have indicated the presence of soil and groundwater contamination. The investigation and remediation plan for the 29th and Mead Superfund Site is in preparation by U.S. EPA Region VII contractors. Due to this investigation into potential contamination of the area, the Clean Harbors Kansas, LLC facility currently does not plan to conduct independent soil or groundwater studies during closure. At final closure, LESW will use the Superfund site cleanup levels as the target levels for closure performance standard for soils and groundwater (as appropriate) at the site. In the event that the Superfund cleanup levels have not been determined at the time of final facility closure, a health risk assessment will be performed and used to set the target closure levels for contaminants in soils and groundwater at the site. The

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health risk assessment and the recommended target levels will be provided to the appropriate regulatory agency for review and approval prior to implementation. During partial closure, soils will be removed or decontaminated if contaminant levels exceed background levels, as determined using the procedures in Section J-4. Subsequent removal of soils from the same area may occur at final closure, depending upon the target levels defined as discussed in the preceding paragraph.

Clean Harbors Kansas, LLC may amend this closure plan in the future in accordance with 40 CFR 270.42.

Because the scope and extent of future site remediation is unknown, this closure plan will address only potential contamination which resulted from hazardous waste management at Clean Harbors Kansas, LLC. Consequently, all areas where evidence of visible contamination exists and areas beneath secondary containment will be evaluated and closed in accordance with J-4a of this closure plan.

During facility operations under this permit application, hazardous waste management areas are covered and have secondary containment that includes diking. These controls minimize precipitation run-on and run-off and will subsequently be maintained during closure. These structures will not be removed until after all associated hazardous waste management units are decontaminated; or, if demolition is required, other practical methods will be implemented to

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control run-on and run-off.

Because the Clean Harbors Kansas, LLC facility does not contain waste piles or surface impoundments, and the facility is not a disposal facility, other activities such as groundwater monitoring and leachate collection are not applicable as part of closure.

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J-4 Partial Closure and Final Closure Activities

Partial facility closure (i.e., closure of individual hazardous waste management units) may be necessary during the active life of the facility. If partial closure is necessary, the individual hazardous waste management unit would be closed in accordance with Section J-9 of this closure plan. Currently, however, CHK plans to close all existing hazardous waste management units during the final facility closure. Clean Harbors Kansas, LLC will close the facility in accordance with the following procedures.

1. Clean Harbors Kansas, LLC will notify the Kansas Department of Health and Environment (KDHE) or the United States Environmental Protection Agency (USEPA), Region 7, Administrator at least 45 days before Clean Harbors Kansas, LLC intends to begin final closure (within 30 days after receiving the known final volume of hazardous waste into a hazardous waste management unit).
2. If modifications to this closure plan are desired and have not been previously approved in accordance with 40 CFR 270.42 and 264.112, the modified portions of the plan will not be implemented until approval by KDHE or other authorized agencies has been received.

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3. Within 90 days after receiving the final volume of hazardous wastes at a hazardous waste management unit or the facility, CHK will either treat or remove from the unit or facility all hazardous wastes in accordance with this closure plan, unless an extension has been requested and approved in accordance with 40 CFR 264.113(a).
4. Clean Harbors Kansas, LLC will complete final closure activities within 180 days after receiving either the final volume of hazardous wastes or final closure plan approval from the agency (whichever is later), unless an extension has been requested and approved in accordance with 40 CFR 264.113(b).
5. Clean Harbors Kansas, LLC will close the facility in accordance with the schedule discussed in Section J-7 and outlined in Table J.3, Closure Activity Schedule - Final Facility Closure, of this closure plan.
6. The container management units will be closed in accordance with Section J-9a of this closure plan. The tank systems will be closed in accordance with Section J-9b of this plan. All miscellaneous units will be closed in accordance with Section J-9c of this plan.
7. All contaminated equipment and structures will be either properly disposed of as hazardous waste or decontaminated in accordance with Section J-4a of this closure

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plan. After decontamination, equipment (such as hand tools, forklifts, and conveyers) and structures may be salvaged for future use.

8. Clean Harbors Kansas, LLC will visually inspect the surface soils at the facility. In accordance with Section J-4a of this closure plan, any visible evidence of contamination will be evaluated for hazardous constituents and (if contamination is present) subsequently removed for proper disposal. The target levels for soil contaminants at partial closure will be determined by comparison to local background levels. For final closure, target levels for closure will be determined by comparison to Superfund cleanup levels or, if necessary, levels set using a site-specific health risk assessment.
9. All wastes generated from closure activities will be handled in accordance with Section J-4b of this closure plan.
10. The Clean Harbors Kansas, LLC facility does not contain disposal units. All tank systems have secondary containment meeting the requirements of 40 CFR 264.193 (b) through (f). Also, all hazardous wastes and hazardous waste constituents will be removed from the facility during final closure and all structures will be decontaminated in accordance with this closure plan. Therefore, the facility is subject to neither the post-closure care requirements of 40 CFR 264.116 through 264.120, nor the contingent post-closure plan requirements of 40 CFR 264.197(c).

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11. Within 60 days of final closure completion, Clean Harbors Kansas, LLC will submit, either by hand delivery or by registered mail, a certification of closure to KDHE or to the Regional Administrator of the USEPA, Region 7. The certification will be signed by CHK, as the owner/operator of the facility, and by an independent registered professional engineer attesting that the units were closed in accordance with this closure plan.

J-4a Disposal or Decontamination of Equipment, Structures and Soils

During the partial and final closure periods, all contaminated equipment and structures will be either properly disposed of or decontaminated.

J-4a(1) Soils

As discussed in Section J-3a, Clean Harbors Kansas, LLC does not currently plan to perform extensive soil or groundwater studies for the purpose of closure because this would duplicate the pending Superfund investigation into potential historical contamination of the site and the surrounding area. The extent of remedial action which will be required at the 29th and Mead Superfund Site has not been determined.

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During closure operations, Clean Harbors Kansas, LLC will inspect the immediate area around all hazardous waste management units for indications of contamination. Any visible evidence of contamination (e.g., staining, discoloration) will be evaluated for hazardous constituents (performing limited soil sampling and analysis if applicable) and, if contamination is present, the soils will be removed for proper disposal. In addition, the concrete base of the containment system will be inspected for evidence of damage (e.g., cracking, pitting, etc.). If this damage may have resulted in migration of hazardous constituents from the containment system, further investigations will be performed to determine the presence and extent of contamination, if any.

Visibly contaminated soil, either adjacent to or under containment systems of waste management units, will be removed. Excavated soil and debris will be analyzed according to standard laboratory procedures for the presence of hazardous constituents and managed in accordance with applicable regulations. Procedures for sampling and analysis of soil remaining after excavation (if applicable) are listed below.

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1. For partial closure involving possible soil contamination, six representative background samples will be taken on-site but away from the visible contamination at depths of 0-18 inches and 18-36 inches at each of three sample points and analyzed using either USEPA SW-846 8260 and/or SW-846 8015, modified, or another equivalent, acceptable method. For all methods of record, deviations from SW-846 methods have either been included in the Waste Analysis Plan (Section C) for agency approval at this time, or will be submitted to the agency for approval prior to use. Background samples will be taken from the same soil type and at the same soil horizon as non-background samples. The facility "background" will be considered the mean plus two standard deviations.
2. All soil analysis procedures will be conducted in accordance with either USEPA method SW-846 numbers 6010, 7471, and/or 8260, modified (as appropriate) or other equivalent procedures. For all methods of record, deviations from SW-846 methods have either been included in the Waste Analysis Plan (Section C) for agency approval at this time, or will be submitted to the agency for approval prior to use.
3. Proper QA/QC procedures will be followed to control the potential loss of

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VOCs during sampling and transport.

4. All visibly contaminated soil will be removed.
5. All visibly contaminated soil that has been removed will be handled in accordance with Section J-4b of this closure plan.
6. After removal of the contaminated soil, three samples will be taken from inside the area of removed soil at depths of 0-6 inches, 12-18 inches, and 24-30 inches. The samples will be analyzed using USEPA SW-846 8260 and SW-846 8015, modified, and in accordance with Step 2 above.
7. For partial closures, soil will be considered clean for closure when results of sample analyses are either at or below on-site background levels as determined under Item 1 of this list. For final closure, soil will be considered clean for closure when results of sample analyses are at or below health risk based levels determined in conjunction with the Superfund process, or alternate standards determined using a health risk assessment and approved by KDHE.
8. If the soil does not meet the conditions specified in Step 7 above, soil will be removed to six inches below the lowest contaminated sample detected. If the

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24-30 inch soil horizon shows contamination as defined in Step 7, Steps 6 through 8 will be repeated.

During final closure operations, the soil beneath containment systems of all hazardous waste management units will be closed as follows.

1. A visual inspection for evidence of release (i.e., staining or discoloration of soil, or damage to containment system) will be performed to determine selected sites for soil or concrete sampling. At the time of closure, if cracks or gaps which may have resulted in contaminant migration are observed in the hazardous waste management unit, a sample site will be located on or near the crack location. Concrete corings will not be taken in any unit for which the facility can document that there has not been a major release during the operating period. Concrete corings will be taken in Building I, and in units in which major releases have been documented during the operating period.
2. Collect samples at three depths, 0-6 inches, 12-18 inches, and 24-30 inches, at each sample point and analyze using either USEPA SW-846 8260 and/or SW-846 8015, modified, or another acceptable method. The samples from each horizon will be composited. For all methods of record, deviations from SW-846 methods have either been included in the Waste Analysis Plan (Section C) for agency approval at this time, or will be submitted to the agency for their

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approval prior to use.

3. Collect background samples in accordance with Item 1 on page 14 of this Closure Plan, unless background levels have already been determined for the site.
4. Proper QA/QC procedures will be followed to control the potential loss of VOCs during sampling and transport.
5. Soil analysis procedures will be according to either USEPA method SW-846 numbers 6010, 7471 and/or 8260, modified (as appropriate) or other acceptable method. For all methods of record, deviations from SW-846 methods have either been included in the Waste Analysis Plan (Section C) for agency approval at this time, or will be submitted to the agency for their approval prior to use.
6. For partial closures, soil will be considered clean for closure when results of sample analysis are at or below on-site background levels as determined under Item 1 on page 13. For final closure, soil will be considered clean for closure when results of sample analyses are at or below health risk based levels determined in conjunction with the Superfund process, or alternate standards determined using a health risk assessment and approved by KDHE.

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7. If large areas of soil contamination, in excess of closure standards, are identified, a project specific assessment and cleanup plan will be prepared and submitted to the KDHE for approval and subsequent implementation. This will be done in accordance with the permit modification procedures of 40 CFR 270.42.

J-4a(2) Hazardous Waste Management Units (HWMUs)

Decontamination procedures for hazardous waste management units (i.e., tank systems, container storage units, and miscellaneous units) are discussed in the following paragraphs. Specific procedures are outlined based on configuration of the equipment. "Exposed surfaces" are external surfaces and those internal surfaces that are readily scraped, sandblasted, brushed, or swept (i.e., accessible to standard techniques for removal of residual materials).

J-4a(2)(a) HWMUs with no internal or complicated external parts

All tank systems, container management units, and miscellaneous units and their associated secondary containment system components and ancillary equipment will be decontaminated as follows (unless the unit has internal and/or complicated external parts exposed to waste).

1. Surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked

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residue. Surfaces will then be triple rinsed. The first wash/rinse will be performed with a high-pressure stream of steam or water with suitable detergents or other cleaning additives. The second wash/rinse will be performed using clean water with cleaning additives. Accumulated liquids from the two first washes will be collected and handled in accordance with Section J-4b of this closure plan. The third wash/rinse will be performed with clean (potable) water.

2. The equipment will be visually inspected after the triple wash/rinse to assess the presence of visible residue. If necessary, the facility will repeat all, or part, of the above procedures.
3. A representative sample will be taken of the rinse water from the final rinse of each hazardous waste management unit. These samples will be analyzed for total concentrations of all constituents with Maximum Concentration Limits (MCL) defined in 40 CFR 264.94.
4. A unit will be considered decontaminated when the rinsate sample analysis results are lower than the MCLs defined in 40 CFR 264.94, and when no visible residues remain on the unit.
4. If the unit is not decontaminated after performing Steps 1 through 4, the facility will either repeat the above procedures or dismantle the unit for further management and/or

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disposal at an off-site permitted TSDF as a hazardous waste. Equipment disposed of in a landfill will meet the applicable Land Disposal Restriction (LDR) standards of 40 CFR 268.

J-4a(2)(b) HWMUs with internal or complicated external parts

Any tank systems or miscellaneous units with external or complicated internal parts exposed to wastes (such as the Shredding Unit) will be decontaminated as follows.

1. Exposed surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be triple rinsed. The first wash/rinse will be performed with a high-pressure stream of steam or water with suitable detergents or other cleaning additives. The second wash/rinse will be performed using clean water with cleaning additives. Accumulated solids and liquids from the two first washes will be handled in accordance with section J.4b of this closure plan. The third wash/rinse will be performed with clean water.
2. The equipment will be visually inspected after the triple wash/rinse to assess the presence of visual residue. If necessary the facility will repeat all, or part, of the above procedures.

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3. If visible contamination remains, go to Step 5 below. If no visible contamination remains, the facility will take a representative sample of the rinse water from the final rinse of the hazardous waste management unit. These samples will be analyzed according to the TCLP (40 CFR 261.24 as amended June 29, 1990).
4. A unit will be considered decontaminated when the rinsate sample analysis results are lower than the values/levels listed in Table J.2, and when no visible residues remain on the unit.
5. If, after performing the above rinsing procedures, the equipment can not be decontaminated, the equipment will be transported by a licensed/permitted hauler to an off-site, permitted TSDF for further treatment or disposal. Equipment disposed of in a landfill will meet the applicable Land Disposal Restriction (LDR) standards of 40 CFR 268.

J-4a(3) Closure of Miscellaneous Handling Equipment

A wide variety of equipment on site may be used for hazardous waste management. Equipment that has been in contact with hazardous waste will be decontaminated during closure activities. Equipment which may require decontamination during closure includes (but is not limited to) industrial trucks, drum dollies, handcarts, conveyers,

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augers, and other material transfer equipment, as well as hand tools such as shovels, brushes, scrapers, etc. During final facility closure, this equipment will be closed in one of the following ways:

- For closure of small equipment (such as hand tools), if visible contamination exists, the equipment will be dismantled and disposed of as hazardous waste at a RCRA/HSWA permitted off-site disposal facility,
- For closure of all equipment (including hand tools), if visible contamination exists, equipment will be decontaminated and disposed of at a solid waste landfill. If evidence of contamination exists after decontamination, the equipment will be transported by a permitted/licensed hauler to a permitted RCRA/HSWA off-site TSDF for further treatment or disposal, or
- For closure of all equipment (including hand tools), if visible contamination exists, equipment will be decontaminated sufficiently to be salvaged for future use and potentially transferred for use at another RCRA facility.

J-4a(3)(a) Decontamination of small miscellaneous handling equipment

All hand tools and equipment without internal or complicated external parts will be

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decontaminated in accordance with the following procedures.

1. Surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be rinsed with a high-pressure stream of steam or water, possibly with suitable detergents or other cleaning additives, until either all visible contamination is removed, or until further removal is not feasible. All accumulated solids and liquids will be handled in accordance with section J-4b of this closure plan.
2. The equipment will be visually inspected for evidence of visible contamination.
3. The equipment will be considered decontaminated when no visible evidence of contamination exists.
4. If visible evidence of contamination remains and cannot be removed, the equipment will be disposed of as a hazardous waste.

J-4a(3)(b) Decontamination of large miscellaneous handling equipment with no internal or complicated external parts

All large equipment with no internal or complicated external parts will be decontaminated as follows.

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1. Surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be triple rinsed. The first wash/rinse will be performed with a high-pressure stream of steam or water with suitable detergents or other cleaning additives. The second wash/rinse will be performed using clean water with cleaning additives. Accumulated solids and liquids from the two first washes will be handled in accordance with section J.4b of this closure plan. The third wash/rinse will be performed with clean water.
2. The equipment will be visually inspected after the triple wash/rinse to assess the presence of visual residue. If necessary, the facility will repeat all, or part, of the above procedures.
3. A representative sample will be taken of the rinse water from the final rinse of each hazardous waste management unit. These samples will be analyzed for total concentrations of MCL constituents.
4. Except in cases where the Hazardous Waste Debris Rule applies, the equipment will be considered decontaminated when the rinsate sample analysis results are lower than the MCLs defined in 40 CFR 264.94, and when no visible residues remain on the unit.

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5. If the unit is not decontaminated after performing Steps 1 through 4, the facility will either repeat the above procedures or dismantle the unit and transport it by a licensed/permitted hauler to an off-site, permitted TSDF for further treatment or disposal.

J-4a(3)(c) Decontamination of large miscellaneous handling equipment with internal or complicated external parts

All large equipment with internal and/or complicated external parts that contact waste will be decontaminated in accordance with the following procedures.

1. Surfaces will be scraped, sandblasted, brushed, or swept to remove all loose or caked residue. Surfaces will then be triple rinsed. The first wash/rinse will be performed with a high-pressure stream of steam or water with suitable detergents or other cleaning additives. The second wash/rinse will be performed using clean water with cleaning additives. Accumulated solids and liquids from the two first washes will be handled in accordance with section J.4b of this closure plan. The third wash/rinse will be performed with clean water.
2. The equipment will be visually inspected after the triple wash/rinse to assess the presence of visual residue. If necessary the facility will repeat all, or part, of the above

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procedures.

3. If visible contamination remains, go to Step 5 below. If no visible contamination remains, the facility will take a representative sample of the rinse water from the final rinse of the hazardous waste management unit. These samples will be analyzed for total concentrations of MCL constituents.
4. A unit will be considered decontaminated when the rinsate sample analysis results are lower than the MCLs defined in 40 CFR 264.94, and when no visible residues remain on the unit.
5. If after performing the above rinsing procedures, the equipment can not be decontaminated, the equipment will be transported by a licensed/permitted hauler to an off-site, permitted TSDF for further treatment or disposal. Equipment disposed of in a landfill will meet the applicable Land Disposal Restriction (LDR) standards of 40 CFR 268.

J-4b Hazardous Waste Handling Procedures

All contaminated solids, liquids, sludges, soils, and debris generated by the closure process will be managed in accordance with applicable regulations as site generated solid waste (i.e., Clean Harbors Kansas, LLC is the generator). Generated wastes meeting the definition of "hazardous waste" under 40 CFR 261.3 will be handled in the manner discussed below.

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Site-generated hazardous wastes may be stored on-site in containers, existing tanks, or temporary portable tanks prior to treatment or removal from the facility. The wastes may be treated on-site in accordance with the facility's RCRA/HSWA permit. A temporary storage area may be developed for storage of these generated wastes, and if so, wastes will be stored in this area for less than ninety days. These wastes will then be transported to a permitted off-site Treatment, Storage, or Disposal Facility (TSDF) by a permitted hazardous waste hauler for appropriate disposal or further treatment (e.g. landfill, deep-well injection, incineration, cement kiln, recycling facility).

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J-5 Maximum Extent of Operations

Table J.1 lists all existing and proposed hazardous waste management units at the Clean Harbors Kansas, LLC facility. This table represents the maximum extent of operations that are currently planned to exist at this facility.

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J-6 Maximum Waste Inventory

The maximum inventory of wastes in storage exists when all hazardous waste management units contain their maximum permitted capacity of waste. The facility's potential maximum waste inventory is 463,477 gallons.^a

^a The maximum waste inventory was calculated by adding S01 (storage in containers) and S02 (storage in tanks) in the Part A permit application.

$$325,490 \text{ gallons (S01)} + 137,987 \text{ gallons (S02)} = 463,477 \text{ gallons}$$

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J-7 Schedule for Final Closure

Table J.3, Closure Activity Schedule - Final Facility Closure outlines the anticipated schedule for closing the Clean Harbors Kansas, LLC facility. The schedule assumes that all hazardous waste management units identified in this plan (See Table J.1) will be closed.

During final closure, hazardous waste management units may be closed simultaneously or sequentially. Also, a temporary storage area may be developed for storage of wastes which are generated on-site during closure activities, and if so, wastes will be stored in this area for less than ninety days in appropriate containers or temporary tanks.

J-7a Expected Year of Final Closure

Clean Harbors Kansas, LLC does not expect to close the facility prior to the permit expiration (i.e., ten years after the effective date of the permit). Since the facility does not consist of disposal units such as landfills or surface impoundments, capacity restraints (such as landfill capacity) do not exist to force facility closure. Therefore, Clean Harbors Kansas, LLC will not estimate the year of final closure [per 40 CFR 264.112(b)(7)].

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J-8 Closure Plan Amendment

Clean Harbors Kansas, LLC maintains a copy of the closure plan at the facility. Clean Harbors Kansas, LLC will submit a written request for approval to change the closure plan, in accordance with 40 CFR 264.112(c) and 40 CFR 270.42, whenever one of the following occurs.

1. Changes in operating plans or facility design affect the closure plan.
2. Change in the estimated year of final closure (see section J-7a).
3. In conducting partial or final closure activities, unexpected events occur which affect the closure plan.

This notification will include a copy of the amended closure plan for review or approval by KDHE. It will be submitted at least 60 days prior to the proposed change in facility design or operation, or no later than sixty days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the partial or final closure period, Clean Harbors Kansas, LLC will submit the notification or request no later than 30 days after the unexpected event's occurrence.

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J-9 Individual Unit Closures

This section details the closure procedures of each individual hazardous waste management unit. During final facility closure and partial facility closure, each hazardous waste management unit will be closed in accordance with this section.

J-9a Container Management Unit (CMU) Closure

Partial facility closure (closure of an individual hazardous waste management unit), may be necessary during the active life of the facility. If a container management unit must be closed during the active life of the facility, it will be closed in accordance with this section (J-9a). At final closure of a container management unit, all hazardous waste and hazardous waste residues will be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues will be either decontaminated or removed.

J-9a(1)Process and Unit Description

The container management units at the Clean Harbors Kansas, LLC facility are used for storing and staging containers of hazardous and non-hazardous wastes. The container management units may also be used for the treatment of hazardous waste in containers. The

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wastes managed in these areas include liquids, sludges, and solids and are managed in containers of varying sizes. The CHK facility manages containerized waste in seven container management buildings, each roofed and constructed with concrete diking to minimize run-on and run-off. These buildings are divided into independently contained sub-areas called Container Management Unit (CMU)s. The maximum total permitted storage capacity of container management units on site is approximately 325,490 gallons. Figure J.1, Material Containment Areas (Drawing 50-01-10-002, Material Containment Areas presented in Section Y) depicts the location of each CMU at the facility; Section D of this permit application describes each CMU in more detail.

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Figure 11 Material Containment Areas

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J-9a(2) Unit Closure Procedures

For the purposes of this closure plan, each container management unit includes the following structures/equipment:

- Containers, drums, pallets, marino bags, etc., and associated hazardous wastes, waste residues and constituents.
- All associated secondary containment structures (concrete pads, curbs, ramps, etc.).
- Associated equipment (e.g., conveyors, etc.).

Buildings which enclose CMUs and which do not come into direct contact with hazardous waste or hazardous waste containers are not part of the container management unit.

Therefore, the buildings associated with CMUs, including floors which are not part of the container management unit, will not be subject to the decontamination procedures of this closure plan and may be left in place. However, these walls and floors will be visually inspected and, if evidence of contamination exists, these structures will be cleaned.

Clean Harbors Kansas, LLC will close all CMUs at the facility as follows.

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1. If modifications to the closure plan are desired and have not been previously approved in accordance with 40 CFR 270.42 and 264.112, the modified portions of the plan will not be implemented until approval by KDHE or other authorized agencies has been received.
2. Clean Harbors Kansas, LLC will close the CMU(s) in accordance with the schedule outlined in Table J.4, Closure Activity Schedule - Container Management Unit (CMU) and discussed in Section J-9a(3) of this closure plan.
3. Within ninety days after receiving the final volume of hazardous wastes at the CMU(s), Clean Harbors Kansas, LLC will remove all waste inventory and portable equipment from the area unless an extension has been requested and approved in accordance with 40 CFR 264.113(a). All waste inventories will be either treated on-site in accordance with the facility's RCRA/HSWA permit or transported to a permitted TSDF for off-site management. Clean Harbors Kansas, LLC will attempt to empty all drums to the extent described by 40 CFR 261.7(b) to satisfy the requirements for the exemption as defined by 40 CFR 261.7(a)(1). The successfully emptied drums will be transported to an off-site industrial waste disposal facility or a permitted RCRA/HSWA TSDF for disposal. If a container cannot be emptied to meet the definition in 40 CFR 261.7(b), then the container will be transported by a licensed hazardous waste hauler to a

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permitted off-site RCRA/HSWA TSDF for management.

4. All contaminated equipment, structures, and secondary containment systems will be:
 - A. Dismantled and disposed of as hazardous waste at a RCRA/HSWA permitted off-site disposal facility, or
 - B. Decontaminated in accordance with Section J-4a and disposed of at a solid waste landfill, or
 - C. Decontaminated in accordance with Section J-4a and either salvaged for future use or left in place.
 - D. Successfully decontaminated equipment may be transferred to another TSDF for use.
5. Clean Harbors Kansas, LLC will visually inspect the surface soils around the CMU(s). Any visible evidence of contamination will be evaluated for hazardous constituents and (if contamination is present) subsequently removed for proper management in accordance with Section J-4a of this closure plan.

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At final closure, the soil beneath the secondary containment systems will be closed in accordance with Section J-4a of this closure plan.

6. All wastes generated on-site from closure activities will be handled in accordance with Section J-4b of this closure plan.
7. Clean Harbors Kansas, LLC will complete closure activities within 180 days after receiving either the final volume of hazardous wastes or closure plan approval by the agency, unless an extension has been requested and approved in accordance with 40 CFR 264.113(b).
8. The CMUs are not disposal units. Also, all hazardous wastes and hazardous waste constituents will be removed from the CMU during closure and all structures will be decontaminated in accordance with this closure plan. Therefore, the CMUs are not subject to the post-closure care requirements of 40 CFR 264.116 through 264.120.

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J-9a(3) Unit Closure Schedule

Table J.4 outlines the anticipated schedule for the individual closure of a container management unit at the Clean Harbors Kansas, LLC facility. During final closure of the facility, all HWMUs may be closed simultaneously and in accordance with the schedule presented in Table J.3.

J-9b Tank System Closure

Partial facility closure (closure of an individual hazardous waste management unit) may be necessary during the active life of the facility. If a tank or tank system must be closed during the active life of the facility, it will be closed in accordance with this section (J-9b). At closure of a tank or tank system, all hazardous waste and hazardous waste residues will be removed from the tank/tank system. Tanks, ancillary equipment, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues will be either decontaminated or removed.

J-9b(1) Process and Unit Description

Tank systems at the Clean Harbors Kansas, LLC facility include storage/treatment tanks; the maximum permitted storage capacity of tanks on site is 137,987 gallons. The

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storage/treatment tanks have several uses at the Clean Harbors Kansas, LLC facility, some of which are discussed below.

- Solvent and solid waste streams are blended, accumulated, and stored in tanks prior to being transported to an off-site cement kiln to be burned as an alternative fuel.
- Other wastes are received from generators either in drums or bulk and are transferred to tanks to await transportation to an off-site reclamation facility, incinerator, deep-well injection facility, landfill or other permitted TSDF.
- Finally, the Clean Harbors Kansas, LLC facility manages solvent laden cartridges (e.g., dry cleaning cartridges). Cartridges are shredded and/or dried to recover solvent or other material for energy recovery and/or reuse, or they may be sent to an off-site TSDF without on-site processing. Recovered vapors are condensed and accumulated in a vessel that is purged after each drier batch. The solvent and water are separated in a phase separation tank, and then stored separately in designated tanks prior to shipment off-site to a TSDF for further reclamation, for disposal, or for other appropriate management.

The tanks used at Clean Harbors Kansas, LLC vary in size. All tanks utilized for hazardous waste management are equipped with a manual gaging port and high level alarms to minimize

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the potential for overflow. All hazardous waste management tanks operating under this permit have secondary containment designed, installed, and operated to prevent migration of wastes or accumulated liquid to the environment. These containment systems, consisting of concrete slabs surrounded by concrete walls or dikes of varying height, enable the detection of and collection of releases and accumulated liquids. The concrete containment liner is also maintained free from cracks and gaps.

These tanks are summarized in Table J.1. In addition, Figure J.2, Tank Locations (Drawing 50-01-03-001, Tank Locations presented in Section Y) shows the location of each tank system at the facility. Section E of this permit application describes the tank systems in more detail. The tank systems are designed, constructed, and operated in accordance with 40 CFR 264.190 through 199.

J-9b(2) Unit Closure Procedures

For the purposes of this closure plan, each tank system includes:

- Tanks and associated hazardous wastes, waste residues and constituents;
- All ancillary equipment including, but not limited to, piping, fittings, flanges, valves, and pumps; and

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- All associated secondary containment structures (concrete pads, curbs, ramps, etc.).

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Figure 13 Tank Locations

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The buildings which contain tank systems and which do not come into direct contact with hazardous waste or hazardous waste tank systems are not part of the tank system. Therefore, these buildings associated with the tank systems, including floors which are not part of the tank system, will not be subject to the decontamination procedures of this closure plan and may be left in place. However, these walls and floors will be visually inspected and, if evidence of contamination exists, these structures will be cleaned.

The tank units at the Wichita facility may undergo periodic changes and upgrading in order to accommodate required regulatory and capacity changes and improvements in technology.

Also, CHK will replace tanks if they become unfit for use. Since each secondary containment system contains several tanks, the Clean Harbors Kansas, LLC facility could potentially close a single tank unit without closing the associated secondary containment system. However, upon final facility closure all tank systems, including secondary containment, will be closed in accordance with this section.

Clean Harbors Kansas, LLC will close all tanks and/or tank systems at the facility as follows.

1. If modifications to the closure plan are desired and have not been previously approved in accordance with 40 CFR 270.42 and 264.112, the modified portions of the plan will not be implemented until approval by KDHE or other authorized agencies has been

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received.

2. Clean Harbors Kansas, LLC will close the tanks and/or tank systems in accordance with the schedule outlined in Table J.5, Closure Activity Schedule - Tanks and Tank Systems and as discussed in Section J-9b(3) of this closure plan.
3. Within ninety days after receiving the final volume of hazardous wastes into the tank/tank system, Clean Harbors Kansas, LLC will remove all waste inventory from the unit(s) unless an extension has been requested and approved in accordance with 40 CFR 264.113(a). All waste inventories will be either treated on-site in accordance with the facility's RCRA/HSWA permit or transported to a permitted TSDF for off-site management.
4. All tanks, ancillary equipment, structures, and secondary containment systems (when applicable) will be:
 - A. Dismantled and disposed of as hazardous waste at a RCRA/HSWA permitted off-site disposal facility, or
 - B. Decontaminated in accordance with Section J-4a and disposed of at a solid waste landfill, or

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- C. Decontaminated in accordance with Section J-4a and either salvaged for future use or left in place.
 - D. Successfully decontaminated equipment may be transferred to another TSDF for use.
5. This step applies only when closing an entire tank system, including its secondary containment. If only closing a tank unit, go to Step 6 below. When closing a tank system, CHK will visually inspect the surface soils around the tank system containment area. In accordance with Section J-4a of this closure plan, any visible evidence of contamination will be evaluated for hazardous constituents and, if contamination is present, subsequently removed for proper disposal or other appropriate off-site management.
- At final closure, the soil beneath the secondary containment systems will be closed in accordance with Section J-4a of this closure plan.
6. All wastes generated on-site from closure activities will be handled in accordance with Section J-4b of this closure plan.

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7. Clean Harbors Kansas, LLC will complete closure activities within 180 days after receiving either the final volume of hazardous wastes into the tank unit(s) or closure plan approval from the agency, whichever is later, unless an extension has been requested and approved in accordance with 40 CFR 264.113(b).
8. The tank systems are not disposal units, and they have secondary containment meeting the requirements of 40 CFR 264.193(b) through (f). Also, all hazardous wastes and hazardous waste constituents will be removed from the tanks/tank systems during closure and all structures will be decontaminated in accordance with this closure plan. Therefore, the tank/tank systems are subject to neither the post-closure care requirements of 40 CFR 264.116 through 264.120, nor the contingent post-closure plan requirements of 40 CFR 264.197(c).

J-9b(3) Unit Closure Schedule

Table J.5 outlines the anticipated schedule for the individual closure of a tank/tank system at the Clean Harbors Kansas, LLC facility. During final closure of the facility, all HWMUs may be closed either sequentially or simultaneously and in accordance with the schedule presented in Table J.3.

J-9c Miscellaneous Unit Closure

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Partial facility closure, closure of an individual hazardous waste management unit, may be necessary during the active life of the facility. If a miscellaneous unit must be closed during the active life of the facility, it will be closed in accordance with this section. At closure of a miscellaneous unit, all hazardous waste and, to the extent possible, hazardous waste residues will be removed from the unit. Furthermore, the miscellaneous unit, associated ancillary equipment, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues will be either decontaminated or removed.

J-9c(1) Process and Unit Description

"Miscellaneous Unit" is defined under 40 CFR 260.10 (as of July 1, 1990) as:

A hazardous waste management unit where hazardous waste is treated, stored, or disposed of, and that is not a container, tank, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under 40 CFR Part 146, or unit eligible for a research, development, and demonstration permit under 40 CFR 270.65.

The Clean Harbors Kansas, LLC facility has miscellaneous units as defined above. Table J.1 and Figure J.3, Miscellaneous Unit Locations (Drawing 50-57-10-001, Miscellaneous Unit Locations presented in Section Y) identify these units and their location at the Wichita facility. A brief description of each unit follows.

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1. Shredder Unit - A toothed wheel shredder which reduces bulk objects into shreds.
2. Granulator Unit - A fixed knife shredder which reduces the size of solid objects.
3. Dispersing Unit - A unit which uses agitation to dissolve viscous liquids and solids removed from containers prior to transferring these materials into tanks or containers.
4. Drum Washing Unit - A unit that mechanically removes waste residue from emptied drums.
5. Drum Scraper Unit - A device which loosens solid and viscous material inside a container so the material may be removed from the container for further management (e.g., treatment, storage).

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Figure J.3. Miscellaneous Unit Locations

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J-9c(2) Unit Closure Procedures

For the purposes of this closure plan, each miscellaneous unit includes the following structures/equipment:

- The unit and associated hazardous wastes, waste residues and constituents;
- Ancillary equipment including, but not limited to, piping, fittings, flanges, valves, and pumps; and
- Associated secondary containment structures (concrete pads, curbs, ramps, etc.).

The buildings which contain miscellaneous units and which do not come into direct contact with hazardous waste or the unit are not part of the miscellaneous unit. Therefore, the buildings associated with the miscellaneous unit, including floors that are not part of the miscellaneous unit system, will not be subject to the decontamination procedures of this closure plan and may be left in place. However, these walls and floors will be visually inspected and, if evidence of contamination exists, these structures will be cleaned.

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The miscellaneous units at the Clean Harbors Kansas, LLC facility may undergo periodic changes, upgrades, or partial closure in order to accommodate required regulatory and capacity changes and improvements in technology. Also, Clean Harbors Kansas, LLC will periodically replace miscellaneous units if they become unfit for use and repair. Since some of the secondary containment systems contain miscellaneous units in addition to tanks and/or CMUs, the facility could potentially close or replace a single miscellaneous unit without closing the associated secondary containment system. However, upon final facility closure all miscellaneous units, including secondary containment, will be closed in accordance with this section.

Clean Harbors Kansas, LLC will close all miscellaneous units at the Wichita facility as follows.

1. If modifications to the closure plan are desired and have not been previously approved in accordance with 40 CFR 270.42 and 264.112, the modified portions of the plan will not be implemented until approval by KDHE or other authorized agencies has been received.

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2. Clean Harbors Kansas, LLC will close the miscellaneous unit(s) in accordance with the schedule outlined in Table J.6, Closure Activity Schedule - Miscellaneous Units and discussed in Section J-9c(3) of this closure plan.

3. Within ninety days after receiving the final volume of hazardous wastes into the miscellaneous unit(s), Clean Harbors Kansas, LLC will remove all waste inventory from the unit(s) unless an extension has been requested and approved in accordance with 40 CFR 264.113(a). All waste inventories will be either treated on-site in accordance with the facility's RCRA/HSWA permit or transported to a permitted TSDF for off-site management.

4. The unit(s), ancillary equipment, structures, and secondary containment systems (when applicable) will be:

A. Dismantled and disposed of as hazardous waste at a RCRA/HSWA permitted off-site disposal facility, or

B. Decontaminated in accordance with Section J-4a and disposed of at a solid waste landfill, or

C. Decontaminated in accordance with Section J-4a and either salvaged for future

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use or left in place.

D. Successfully decontaminated equipment may be transferred to another TSDF for use.

5. This step applies only when closing an entire miscellaneous unit system, including its secondary containment. If only closing a miscellaneous unit, go to Step 6 below.

When closing the miscellaneous unit(s) and its associated secondary containment, Clean Harbors Kansas, LLC will visually inspect the surface soils around the unit's containment area. Any visible evidence of contamination will be evaluated for hazardous constituents and (if contamination is present) subsequently removed for proper disposal or other off-site management in accordance with Section J-4a of this closure plan.

At final closure, the soil beneath the secondary containment systems will be closed in accordance with Section J-4a of this closure plan.

6. All wastes generated on-site from closure activities will be handled in accordance with Section J-4b of this closure plan.

7. Clean Harbors Kansas, LLC will complete closure activities within 180 days after receiving either the final volume of hazardous wastes into the miscellaneous unit(s) or

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closure plan approval by the agency (whichever is later), unless an extension has been requested and approved in accordance with 40 CFR 264.113(b).

8. The miscellaneous units are not disposal units. Also, all hazardous wastes and hazardous waste constituents will be removed from the miscellaneous units during closure and all structures will be decontaminated in accordance with this closure plan. Therefore, the miscellaneous units are not subject to the post-closure care requirements of 40 CFR 264.116 through 264.120.

J-9c(3) Unit Closure Schedule

Table J.6 outlines the anticipated schedule for the individual closure of a miscellaneous unit at the Clean Harbors Kansas, LLC facility. During final closure of the facility, all HWMUs may be closed either sequentially or simultaneously and in accordance with the schedule presented in Table J.3.

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J-10 Financial Requirements

Closure costs are estimated in Appendix J-B, Closure Cost Estimate.

Financial requirements for hazardous waste TSDFs are addressed in Section K, Financial Requirements of this document.

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Endnote

Groundwater Technology, Inc., Draft Remedial Investigation Report for the 29th and 30th RI/FS, August 27, 1991.

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APPENDIX J-A

TABLES

TABLE J.1

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MAXIMUM EXTENT OF OPERATIONS

CLEAN HARBORS KANSAS, LLC - HAZARDOUS WASTE MANAGEMENT UNITS

<u>HWMU^b</u>	<u>UNIT</u>	<u>Wastes Stored/Function</u>
C	CMU C100 ^c	Hazardous waste - Container Management
C	CMU C200	Hazardous waste - Container Management
C	CMU C300	Hazardous waste - Container Management
C	CMU C400	Hazardous waste - Container Management
C	CMU C500	Hazardous waste - Container Management
C	CMU C600	Hazardous waste - Container Management

^b HWMU - Hazardous Waste Management Unit - All HWMUs at the HRI Wichita facility are either Container Management Areas (C), Tanks/Tank Systems (T), or Miscellaneous Units (M) as defined by 40 CFR 260.10. The unit closure procedures for these units are detailed in Section J-9a, Section J-9b, and Section J-9c respectively.

^c Each section represents an individually contained area (i.e. CMU). See Figure J.1 for CMU locations.

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C	CMU C700	Hazardous waste - Container Management
C	CMU B100	Hazardous waste - Container Management
C	CMU B200	Hazardous waste - Container Management
C	CMU B300	Hazardous waste - Container Management

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<u>HWMU</u>	<u>UNIT</u>	<u>WASTES STORED/FUNCTION</u>
C	CMU B400	Hazardous waste - Container Management
C	CMU D100	Hazardous waste - Container Management
C	CMU D200	Hazardous waste - Container Management
C	CMU D300	Hazardous waste - Container Management
C	CMU I100	Hazardous waste - Container Management
C	CMU I200	Hazardous waste - Container Management
C	CMU I300	Hazardous waste - Container Management
C	CMU J100	Hazardous waste - Container Management
C	CMU J200	Hazardous waste - Container Management
C	CMU J300	Hazardous waste - Container Management
C	CMU J400	Hazardous waste - Container Management
C	CMU J500	Hazardous waste - Container Management
C	CMU J600	Hazardous waste - Container Management
C	CMU J700	Hazardous waste - Container Management
C	CMU L100	Hazardous waste - Container Management
C	CMU P100	Hazardous waste - Container Management
C	CMU P200	Hazardous waste - Container Management
T	V-1	Hazardous Waste Liquid

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T	V-2	Hazardous Waste Liquid
T	V-3	Hazardous Waste Liquid
T	V-4	Hazardous Waste Liquid

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<u>HWMU</u>	<u>UNIT</u>	<u>WASTES STORED/FUNCTION</u>
T	V-5	Hazardous Waste Liquid
T	V-6	Hazardous Waste Liquid
T	V-7	Hazardous Waste Liquid
T	V-8	Hazardous Waste Liquid
T	V-9	Hazardous Waste Liquid
T	V-10	Hazardous Waste Liquid
T	V-11	Hazardous Waste Liquid
T	V-12	Hazardous Waste Liquid
T	V-13	Hazardous Waste Liquid
T	V-14	Hazardous Waste Liquid
T	V-15A	Hazardous Waste Liquid
T	V-15B	Hazardous Waste Liquid
T	V-15C	Hazardous Waste Liquid
T	V-15D	Hazardous Waste Liquid
T	V-16	Hazardous Waste Liquid
T	V-17	Hazardous Waste Liquid
M	V-20	Shredder Unit

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M	V-21	Granulator Unit
M/T	V-26	Dispersing Unit

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<u>HWMU</u>	<u>UNIT</u>	<u>WASTES STORED/FUNCTION</u>
M	V-34	Drum Washing Unit
M	V-35	Drum Scraping Unit
C	All CMUs	Treatment in Containers

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TABLE J.3

CLOSURE ACTIVITY SCHEDULE - FINAL FACILITY CLOSURE

<u>Calendar Days Lapsed</u>	<u>Closure Activity</u>
-45	Notification to KDHE or the EPA Region 7 Administrator.
0	Receipt of known final volume of hazardous waste or receipt of final closure plan approval from agency (whichever is later). Begin work-force mobilization. Begin treatment and removal of tank waste inventory. Begin treatment and removal of container waste inventory.
90	Complete treatment and removal of all hazardous waste inventories.
120	Complete decontamination of tanks, container management units and miscellaneous units.
150	Complete dismantling/removal of all generated wastes, temporary storage units, and decontaminated tanks, equipment, and structures (if removal is necessary). Visually inspect surface soils for contamination and begin remediation procedures if necessary.
180	Complete final closure activities.
200	Inspection of facility by a Professional Engineer.

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Submit a certification of closure to KDHE or the EPA Region 7 Administrator.

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TABLE J.4

CLOSURE ACTIVITY SCHEDULE - CONTAINER MANAGEMENT UNIT

<u>Calendar Days Lapsed</u>	<u>Closure Activity</u>
0	Receipt of known final volume of hazardous waste into the container management unit or receipt of closure plan approval from agency (whichever is later). Begin work-force mobilization. Begin treatment and removal of waste inventory.
90	Complete treatment and removal of all hazardous waste inventories.
120	Complete emptying all drums and removal of drums from facility.
150	Complete decontamination of secondary containment structures and hazardous waste handling equipment. Visually inspect surface soils for contamination and begin remediation procedures if necessary.
180	Complete final closure activities.

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TABLE J.5

CLOSURE ACTIVITY SCHEDULE - TANKS AND TANK SYSTEMS

<u>Calendar Days Lapsed</u>	<u>Closure Activity</u>
0	Receipt of known final volume of hazardous waste or receipt of closure plan approval from agency (whichever is later). Begin work-force mobilization. Begin treatment and removal of tank waste inventory.
90	Complete treatment and removal of all hazardous waste inventories.
120	Complete decontamination of tanks, ancillary equipment, and secondary containment systems (when applicable).
150	Complete dismantling/removal of decontaminated tanks, equipment, and secondary containment structures (when removal is necessary). Visually inspect surface soils for contamination and begin remediation procedures if necessary.
180	Complete final closure activities.

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TABLE J.6

CLOSURE ACTIVITY SCHEDULE - MISCELLANEOUS UNITS

<u>Calendar Days Lapsed</u>	<u>Closure Activity</u>
0	Receipt of known final volume of hazardous waste or receipt of closure plan approval from agency (whichever is later). Begin work-force mobilization.
120	Complete decontamination of miscellaneous unit(s), ancillary equipment, and secondary containment systems (when applicable).
150	Complete dismantling/removal of decontaminated miscellaneous unit(s), equipment, and secondary containment structures (when removal is necessary). Visually inspect surface soils for contamination and begin remediation procedures if necessary.
180	Complete final closure activities.

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APPENDIX J-B

CLOSURE COST ESTIMATE

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- Appendix K-B, Certificate of Insurance for Closure or Post Closure Care
- Appendix K-C, Hazardous Waste Certificate of Insurance
- Appendix K-D, Notice in Deed

List of Acronyms

- Clean Harbors Kansas, LLC (CHK)
- Certificate of Insurance for Closure or Post Closure Care (CI)
- Treatment, Storage and Disposal (TSD)
- Kansas Administrative Regulations (KAR)

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K-1 Financial Assurance: 40 CFR 264.143

Clean Harbors Kansas, LLC (CHK) has chosen to use a Certificate of Insurance for Closure or Post Closure Care (CI) to meet facility closure financial assurance requirements. The CI is currently issued by Steadfast Insurance Company of Schaumburg, Illinois.

Appendix K-A, Financial Assurance Information, summarizes facility information, funds assured for closure, and details regarding the CI. The CI is amended annually for inflation as required by 40 CFR 264.142(b) for hazardous waste Treatment, Storage, and Disposal (TSD) facilities operating under a Hazardous Waste Permit. The facility closure cost estimate and corresponding funding instrument will be adjusted on an annual basis for: 1) inflation; and 2) whenever facility changes affecting closure costs occur. A copy of the CI is presented in Appendix K-B, Certificate of Insurance for Closure or Post Closure Care.

One of the options specified in 40 CFR 264.143 paragraphs (a) through (f) must be established to provide financial assurance for closure of a TSD facility. CHK may convert the financial instrument described above to an alternate option specified by federal regulations.

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K-2 Insurance Coverage: 40 CFR 264.147

CHK maintains insurance policies to cover general liability, automobile liability, workers compensation, employers' liability and environmental impairment liability (pollution legal liability). The environmental impairment liability includes both sudden and non-sudden pollution coverage. A copy of the Hazardous Waste Facility Certificate of Insurance for accidental occurrences is presented in Appendix K-C, Hazardous Waste Certificate of Insurance.

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K-3 Notice in Deed: 40 CFR 119(b)(1)

In compliance with Kansas Administrative Regulations (KAR) 28-31-8(c) and in anticipation of Post-closure Notices required of TSDFs, CHK has submitted correspondence dated April 16, 1991 regarding property use for hazardous waste management activities to the Registrar of Deeds for Sedgwick County. Copies of these documents are presented in Appendix K-D, Notice in Deed.

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Financial Requirements
Appendix K-A - Financial Assurance Information**

**Appendix K-A
Financial Assurance Information**

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Appendix K-A - Financial Assurance Information

Facility Information

EPA ID NO: KSD007246846
Facility Name: Clean Harbors Kansas, LLC
Facility Location: 2549 North New York, Wichita, Kansas 67219

Certificate of Insurance for Closure or Post Closure Care (CI)

CI Policy Number: [REDACTED] Ex. 4
Issuing Institution: Steadfast Insurance Company, Schaumburg, IL
Execution Date: September 6, 2003
Funds Assured: \$ 1,568,109.00

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Financial Requirements
Appendix K-B - Certificate of Insurance**

Appendix K-B

Certificate of Insurance for Closure or Post Closure Care

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**Appendix K-C
Hazardous Waste Certificate of Insurance**

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Figure M.9, 40/50/60 VSM 18 Disperser
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Note: Figures M.2 through M.12 are presented in Appendix M-A

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Appendix M-F, Draft Preliminary Assessment Report for LESW

List of Referenced Drawings

Referenced drawings are presented in Section Y
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Drawing D-35-52-800, 55 Gallon Drum Scraper
Drawing D-43-10-6-100, Motor Location and Specification
Drawing PD 12/3/91, 1129 Gallon Dispersing Tank
Drawing DL34055, 40/50/60 VSM 18 Disperser; FCF-Bowers
Drawing Barrel Dump Assembly; PD 1/25/91
Drawing 665300-4-W404F, P&ID Process Areas, FD
Drawing D990043, Triple Rinse - HRI; BRI, Inc.

Acronym Table

Clean Harbors Kansas, LLC (CHK)
Title 40 of the Code of Federal Regulations (40 CFR)
Occupational Safety and Health Administration (OHSA)
National Fire Protection Association (NFPA)
Waste Analysis Plan (WAP)

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M-1 Introduction

This section describes several waste management units at Clean Harbors Kansas, LLC (CHK) which have not been classified by state or federal regulatory agencies as tanks or containers for the purpose of regulation under Title 40 of the Code of Federal Regulations (40 CFR) Part 264. These units are the Drum Scraper Unit, the Drum Washing Unit, and The Dispersing Unit that is also permitted as a tank (V-26) in Section E, Tank Systems. All of these units have been classified as miscellaneous units regulated under 40 CFR 264 Subpart X by Region 7 of the U.S. Environmental Protection Agency. Each of these units may be used to physically or chemically alter hazardous wastes managed at CHK. Their specific locations are shown on Figure M.1, Miscellaneous Unit Locations (Drawing 50-57-10-001, Miscellaneous Unit Locations). This section will address the regulations for miscellaneous units as they apply to each unit listed above.

M-1a Wastes Managed in Miscellaneous Units

Miscellaneous units on site are utilized for regulated and non-regulated waste management. Any regulated RCRA wastes identified on the facility Part A application (presented in Section A of this application) may be managed in any miscellaneous unit on site so long as the waste is compatible with equipment or concurrently managed wastes.

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Facility waste management practices have been developed to prevent the perpetuation of waste code(s) managed in tank systems and miscellaneous units. The waste code(s) applicable to a given wastestream processed in a unit is(are) retained for a specified processing time interval or processing volume; the waste code(s) associated with a given waste is(are) dropped from documentation after that specified time interval or process volume is elapsed. Specific practices for tanks, miscellaneous units, and piping are outlined below.

- Tanks - After removal of a listed or characteristic waste, tanks will be cleaned by rinsing, scraping, brushing, or other physical method until deemed visually clean. Waste codes of previously managed wastes will not be carried on subsequent waste streams managed.
- Miscellaneous Units - The three unit volumes processed through the unit after completion of management of a listed or characteristic waste will be considered as carrying the same listed codes, or characteristic codes (unless tested and shown otherwise). Waste codes will be dropped from waste streams managed subsequent to these three unit volumes. The volumes of each miscellaneous unit are listed below:

Drum Scraper	72 gallons
Drum Washer	1173 gallons
Disperser	0 gallons (accounted for with tank storage volumes).

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- Piping - The one unit volume processed through piping after completion of management of a listed or characteristic waste will be considered as carrying the same listed codes, or characteristic codes (unless tested and shown otherwise). Waste codes will be dropped from waste streams managed subsequent to this one unit volume.

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M-2 Unit Descriptions

M-2a Shredder and Granulator Units Note: the Shredder and Granulator units were closed in August, 1998.

M-2b Drum Scraper Unit

M-2b(1) Purpose

The Drum Scraper Unit is used to enhance the removal of solid, viscous, and/or sticky materials from containers such as 55 gallon drums. Before a container is placed in the Drum Scraper Unit, the top of the container is removed, and any free liquid standing on top of the drummed waste may be pumped out. When the container containing waste is placed in the unit, a cylinder extends down from the unit into the container. A rotating metal blade then extends down inside the cylinder and into the waste, where it cuts up the waste so it can be dumped out. Once the cutting is finished the cylinder and blade assembly is raised from the container, the container is immediately put into the dumper, and the contents are dumped into the Dispersing Unit; alternatively, the top is placed back on the container and the container is moved by conveyor to the Dispersing Unit or to another processing area.

The Drum Scraping Unit is constructed primarily of carbon steel and is located in the Process Area at CHK as shown in Figure M.1.

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Figure M.5, 55 Gallon Drum Scraper (Drawing D-35-52-800, 55 Gallon Drum Scraper) and Figure M.6, Motor Location and Specification Drawing D-43-10-6-100, Motor Location and Specification) show the dimensions and configuration of the unit.

The regulations in 40 CFR 264 Subparts I through O do not apply specifically to the Drum Scraping Unit; however, this unit is located in a container management area and has secondary containment which meets the requirements of 40 CFR 264 Subpart I, Use and Management of Containers.

**M-2b(2) Drum Scraper Unit compliance with standards for emissions or releases:
264.601 and 264.602**

**M-2b(2)(a) Prevention of releases to the subsurface environment or groundwater:
264.601 (a)**

Releases of waste from the Drum Scraper Unit to the subsurface or groundwater are extremely unlikely for these reasons.

- (1) The waste processed by the Drum Scraper Unit is predominantly solid, and has had most free liquids removed.
- (2) The Drum Scraper Unit is located in a secondary containment area that meets the requirements of 40 CFR 264 Subparts I and J. The containment has sufficient volume to contain a spill of the entire contents of a container within the unit (the unit has no

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waste holding capacity of its own), and is coated with a material that is sufficiently impervious to the wastes processed in the unit. Secondary containment volume calculations are included in appendices of Section D, Use and Management of Containers, and Section E, Tank Systems.

- (3) Various aspects of the condition of this unit and of the containment area are inspected each operating day or week, as described in Section F, Inspection Plan. Leaks or spills that might be associated with this unit are cleaned up within 24 hours of their discovery, or as soon as it is safe and practicable.
- (4) The unit is located inside a containment unit with a large area, and is physically separated and removed from any surface water, wetlands, or soil. The location of the facility relative to nearby bodies of water is shown in the topographic map in Section B, Facility Description.
- (5) CHK maintains a Contingency/Emergency Plan for use in situations such as a major spill, a fire, or an explosion. This plan incorporates measures to mitigate releases to the environment from the unit, and to protect human health and the environment from such releases.

M-2b(2)(b) Prevention of releases to surface water, wetlands or soil: 264.601(b)

Releases of waste from the Drum Scraper Unit to surface water, wetlands, or soil are extremely unlikely for the reasons stated in M-2b(2)(a).

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M-2b(2)(c) Prevention of releases to the air: 264.601(c)

The design and operation of the Drum Scraper Unit controls releases of waste constituents to the air from the unit to prevent releases that may adversely affect human health or the environment. The wastes processed in this unit are generally thick, viscous liquids or solids contaminated with organic solvents. These solvents could potentially volatilize during the scraping process. While the container is being scraped a cylinder extends down into the container from the unit, and houses the metal boring and scraping assembly. The cylinder fits snugly inside the container and is closed at the top to minimize emissions. Vapors released from the containers during the time that they are opened and the cylinder is not inside them would be nominal since the containers are opened just before they are processed in the scraper, and are reclosed or are dumped right after they are scraped.

The only people who could potentially be exposed to these very small quantities of vapors are the CHK employees who work in the immediate area, and they are protected from exposure by the protective clothing and equipment that they wear. The potential for contaminants reaching persons outside the Processing Area or outside the facility, if any such potential exists at all, is much lower due to the emission controls discussed above. An exposure study was performed in August of 1991 at CHK to determine the potential for exposure of workers in the Processing Area (where the Drum Scraper Unit is located) to organic solvent vapors. The air in this area

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was monitored for six different organic compounds. Of these six compounds only three were detected, and they were detected in trace quantities that were well below the Occupational Safety and Health Administration (OSHA) permissible exposure levels for unprotected workers. A summary of the results of this study is contained in Appendix M-C.

M-2b(2)(d) Monitoring and Inspections: 264.602

The Drum Scraper Unit, and the surrounding area will be visually inspected each operating day for evidence of leaks or spills in accordance with the facility inspection plan described in Section F, Inspection Plan. The secondary containment system will also be inspected each operating day for evidence of cracks or breaches of containment in accordance with this inspection plan.

M-2c Dryer Note: the Dryer Unit was closed in September, 1996.

M-2d Dispersing Unit

M-2d(1) Purpose

The Dispersing Unit is used to blend various wastes and solvents into a fuel, to facilitate storage or transportation, or for other waste management purposes. It consists mainly of a tank with a mixing blade inside, attached to a container dumping assembly. These components

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are shown in Figure M.8, 1129 Gallon Dispersing Tank; Figure M.9, 40/50/60 VSM 18 Disperser; and Figure M.10, Barrel Dump Assembly; in Appendix M-A (Drawing PD 12/3/91, 1129 Gallon Dispersing Tank; Drawing DL34055, 40/50/60 VSM 18 Disperser; FCF-Bowers; and Drawing Barrel Dump Assembly; PD 1/25/91). The operation of Dispersing Unit is described below.

Wastes and other materials are placed in the Dispersing Unit Tank by pumping from tanks, containers, or trucks; or by dumping from containers using the container dumper. The container dumper automatically tips the container so that the loose contents pour in a chute and into the Dispersing Unit Tank. The dumper also has the capability to spray high pressure solvent, (e.g. diesel fuel), into the container while it is tipped in order to enhance removal of the waste. The material in the Dispersing Unit Tank is blended and mixed by a rotating mixing blade and, if necessary, by circulating the material through a gear pump, and/or a small shredding device. The blended material is then pumped to tanks or containers for further blending, for transportation, and/or for storage. Figure M.11. P&ID Process Areas (Drawing 665300-4-W404F, P&ID Process Areas, FD) schematically shows the Dispersing Unit and its associated piping. Further information on the Dispersing Unit hardware may be found in Appendix M-E, Operating Manuals: Dispersing Unit.

Among the materials processed in the Dispersing Unit are solids and liquids such as waste solvents and paint.

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The Dispersing Unit is constructed primarily of carbon steel, and the dimensions of its components are shown in Figures M.8, M.9, and M.10. The unit is located in the Process Area at CHK as illustrated in Figure M.1.

M-2d(2) Dispersing Unit compliance with applicable hazardous waste treatment and storage standards

The major component of the Dispersing Unit is a tank in which hazardous waste and other materials are mixed, so 40 CFR 264 Subpart J standards for treatment and storage of hazardous waste in tanks apply to the Dispersing Unit. The Dispersing Unit's compliance with hazardous waste tank regulations is discussed below.

M-2d(2)(a) Description of Tank System: 270.16(a), (b), and (e), 264.192 (a)

The purpose of the following discussion is to describe the operation of the Dispersing Unit Tank at CHK. A certified assessment of this tank by an independent, qualified, registered, professional engineer as required by 40 CFR 264.192(a) is presented in Appendix E-A, Tank System Assessments, of Section E, Tank Systems. The tank system assessments include secondary containment calculations and certifications, compatibility statements, and tank assessment field notes. The Dispersing Unit Tank drawing is provided in Appendix E-B of

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Section E.

Piping and instrumentation diagrams, and process flow diagrams for the Dispersing Unit are presented in Section N, Air Emissions. Figure M-8 shows the dimensions of the Dispersing Unit Tank. The working capacity of the Dispersing Unit Tank, V-26, is 1,129 gallons.

The Dispersing Unit is located on top of a concrete secondary containment pad that is sloped to a collection area. This design ensures that the external shell of the tank and any external metal components of the tank system will not be in contact with soil or standing water; therefore, the requirements of 40 CFR 264.192 (a)(3) (corrosion expert assessment) are not applicable. As required by 40 CFR 264.193 (c)(4), any accumulated precipitation that gathers in the secondary containment system after a storm is removed within twenty-four (24) hours of detection, or in as timely a manner as possible.

M-2d(2)(b) Operational Practices: 270.16(c), (i), (j), 264.194, 264.198, 264.199, 264.195

The following information is supplied to meet the specific requirements of regulations promulgated under RCRA regarding tank operating practices.

M-2d(2)(b)(1) General Operating Requirements: 270.16(i), 264.194

Any material that could cause the Dispersing Unit Tank, or its ancillary equipment or

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secondary containment system to fail (i.e., rupture, leak, etc.) will not be designated for management in the Dispersing Unit tank system. Assessments for compatibilities of wastes with the Dispersing Unit tank system materials are presented in Appendix E-A of Section E, Tank Systems.

CHK will use the appropriate controls and practices to prevent spills and overflows from the Dispersing Unit Tank. Spill prevention controls include check valves, dry disconnect couplings, and secondary containment around the unit. Overfill prevention controls include level sensing devices, high level alarms, automatic shutoff of the drum dumper, visual inspections during transfer, and maintenance of adequate freeboard. The Dispersing Unit has a manual gauging port for overflow protection.

M-2d(2)(b)(2) Description of Feed Systems, Safety Cutoff, Bypass Systems, and Pressure Controls: 270.16 (c)

A description of the feed systems, safety cutoff, bypass systems, and pressure controls is provided below for the Dispersing Unit.

M-2d(2)(b)(2)(a) Feed Systems and Safety Cutoff

Level detection systems on the Dispersing Unit Tank are checked each operating day material transfer to or from this tank takes place. Check valves are present as needed within the system

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to prevent reversal of flow.

M-2d(2)(b)(2)(b) Pressure Controls

Pressure controls are not necessary for the Dispersing Unit tank since it is an atmospheric tank.

M-2d(2)(b)(3) Special Requirements for Handling Incompatible, Ignitable, or Reactive Waste: 270.16 (j), 264.198, 264.199

Wastes exhibiting the characteristic of reactivity will not be placed in the Dispersing Unit.

The Dispersing Unit will comply with the requirements for the maintenance of protective distances between the waste management area and any adjoining property lines as outlined in the National Fire Protection Association (NFPA) "Flammable and Combustible Liquids Code". Smoking will not be permitted in the vicinity of the Dispersing Unit.

The procedures outlined in the Waste Analysis Plan (WAP), found in Section C, will be followed to ensure that no incompatible wastes or incompatible waste and materials are placed in the Dispersing Unit. Additionally, hazardous waste will not be placed in the unit if it previously held an incompatible waste or material unless compliance with 40 CFR 264.17(b) is demonstrated. Compliance with 40 CFR 264.17(b) will be documented as described in Section J, Closure Plan. More discussion on procedures for handling ignitable, incompatible, or reactive waste is contained in Section G, Procedures to Prevent Hazards.

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M-2d(2)(b)(4) Inspections: 264.195

The inspection schedule for tank systems, including the Dispersing Unit tank system, is provided in Section F, Inspection Plan. CHK will document the results of these inspections in the operating record to be kept at the facility.

M-2d(2)(b)(5) Contingency Measures: 264.196

The procedures for responding to a situation where leaking or unfit-for-use tank systems are discovered is discussed in the Section H, Contingency/Emergency Plan. If a leak or spill occurs from the Dispersing Unit Tank then CHK will comply with the applicable requirements listed in 40 CFR 264.196.

M-2d(2)(c) Containment and Detection of Releases: 264.193, 270.16(g)

The secondary containment system for the Dispersing Unit Tank has been designed, installed, and is operated to prevent migration of wastes or accumulated liquid to the environment. The containment system provides for the detection of and collection of releases and accumulated liquids; accumulated liquids will be removed from containment systems within 24 hours or as soon as is practicable.

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The secondary containment system for the Dispersing Unit Tank consists of a concrete slab surrounded with a concrete dike. The containment system for the Process Area is sloped toward the center to facilitate detection and removal of any potential released material or other liquid. Accumulated liquids will be removed and managed appropriately. The secondary containment system has been designed to have sufficient structural strength and thickness to minimize the potential of failure owing to pressure gradients, physical contact with waste, climatic conditions, or the stress of daily operations. Additionally, the foundations will provide resistance to pressure gradients above and below the system and will minimize the potential for failure due to settlement, compression, or uplift (see tank certifications presented in Appendix E-A of Section E, Tank Systems).

The Dispersing Unit containment area is coated with a sealant to protect against chemical attack of the concrete surface. The containment area has been designed to completely underlay the tank, and to cover surrounding earth most likely to come into contact with a release of waste (i.e., capable of preventing lateral and vertical migration).

The Dispersing Unit containment area is inspected each operating day for the presence of liquids. Inspections will enable facility personnel to determine if failure of the tank or the containment structure has occurred. The Dispersing Unit Tank is elevated and is visually inspected for leaks.

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Accumulated liquids collected in the secondary containment system will be removed within 24 hours or as soon as practical (e.g., by using vacuum truck, portable pump, etc.), and managed according to the procedures outlined in the Waste Analysis Plan in Section C, Waste Characterization.

Ancillary equipment (e.g., pumps) associated with the Dispersing Unit tank system has been located within the tank systems' secondary containment areas, within secondary containment areas for pumps, or within the containment area of an associated loading or unloading area. Therefore, sufficient secondary containment is provided for the ancillary equipment. All piping utilized for transfer of hazardous waste to and from the Dispersing Unit is above ground, welded, and inspected each operating day for leaks or damage.

Drawings that provide details for the secondary containment areas are provided in Section D, Use and Management of Containers, Appendix D-A. The secondary containment system for the Processing Area has been designed to provide sufficient capacity to contain 100 percent of the capacity of the largest tank within its boundaries as well as enough containment volume to contain the amount of precipitation that would normally blow under the roof during a twenty-four hour, twenty-five year rainfall event. Also, each containment area has been designed and is operated in a manner to prevent run-on. The Dispersing Unit is located under a roof with attached walls that come partially to the ground to reduce precipitation ingress. The secondary containment capacity calculations for tanks in the Processing Area are provided in Appendix

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E-A of Section E, Tank Systems; the results of these calculations show the secondary containment capacity in the Processing Area is greater than required for the tanks in the area, including the Dispersing Unit Tank.

**M-2d(3) Dispersing Unit compliance with standards for emissions or releases:
264.601 and 264.602 standards**

**M-2d(3)(a) Prevention of releases to the subsurface environment or groundwater:
264.601 (a)**

Releases of waste from the Dispersing Unit to the subsurface or groundwater are extremely unlikely for these reasons.

- (1) The Dispersing Unit is located in a secondary containment area which meets the requirements of 40 CFR 264 Subparts I and J. The containment has sufficient volume to contain a spill of the entire contents of the unit, and is coated with a material that is compatible with the wastes processed in the unit. Secondary containment volume calculations are included in appendices of Section D, Use and Management of Containers, and Section E, Tank Systems.
- (2) Various aspects of the condition of this unit and of the containment area are inspected each operating day or week, as described in Section F, Inspection Plan. Leaks or spills that might be associated with this unit are cleaned up within 24 hours of their discovery, or as soon as it is safe and practicable.
- (3) The unit is located inside a large containment area, and is physically separated and

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removed from any direct contact with surface water, wetlands, or soil. The location of the facility relative to nearby bodies of water is shown in the topographic map in Section B, Facility Description.

- (4) CHK maintains a Contingency/Emergency Plan for use in situations such as a major spill, a fire, or an explosion. This plan incorporates measures to mitigate releases to the environment, and to protect human health and the environment from such releases.

M-2d(3)(b) Prevention of releases to surface water, wetlands or soil: 264.601(b)

Releases of waste from the Dispersing Unit to surface water, wetlands, or soil are extremely unlikely for the reasons stated in M-2d(3)(a).

M-2d(3)(c) Prevention of releases to the air: 264.601(c)

The design and operation of the Dispersing Unit controls releases of waste constituents to the air from the unit to prevent releases which may adversely affect human health or the environment.

The wastes processed in the Dispersing Unit often contain organic solvents. These solvents could potentially volatilize while being mixed in the unit. The Dispersing Unit Tank is covered and can be closed to prevent release of volatile organic vapors when material is not

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being added or removed. A flexible seal closes the opening where the shaft for the mixing blade extends down into the tank. A second opening in the top of the tank through which the chute from the container dumper extends, can be closed by a knife-gate valve when material is not being added to the disperser tank.

The persons most likely to be exposed to potential air contaminants from this unit are CHK employees who work in the vicinity of the Dispersing Unit. The potential for contaminants reaching persons outside this area or outside the facility, if any such potential exists at all, is significantly reduced by the unit's emission controls. An exposure study was performed in August of 1991 at CHK to determine the potential for exposure of workers in the Processing Area (where the Dispersing Unit is located) to organic solvent vapors. The air in this area was monitored for six different organic compounds. Of these six compounds only three were detected, and they were detected in trace quantities that were well below the OSHA permissible exposure levels for unprotected workers. A summary of this study is contained in Appendix M-C, Clean Harbors Air Monitoring Data.

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M-2d(3)(d) Monitoring and Inspections: 264.602

The Dispersing Unit and the surrounding area will be visually inspected each operating day for evidence of leaks or spills in accordance with the facility inspection plan described in Section F, Inspection Plan. The secondary containment system will also be inspected each operating day for evidence of cracks or breaches of containment in accordance with this inspection plan.

M-2e Drum Washing Unit

M-2e(1) Purpose

The Drum Washing Unit is used to wash residues from emptied containers. Some of these containers will not meet the criterion for empty containers stated in 40 CFR 261.7. The operation of the Drum Washing Unit is described below.

Containers which have had their contents removed are placed right side up on a conveyor which leads to the Drum Washing Unit. When the containers enter the unit they are lifted up and placed on their side, and then inverted. A chain then pulls the container to the first wash station where a wash wand extends up into the container and sprays washing fluid at high pressure to remove residues in the container. The wash fluid and residues drain out of the container into the wash fluid reservoir. The wash wand then retracts and the container is pulled by a chain to a second station where the washing process is repeated. The container is

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then pulled to a third station where a wand extends in to the container and it is washed again, this time with the container tipped slightly to allow the fluid to more completely drain out. The container is then set upright by the unit and it is placed on a conveyor which carries it away from the washer.

Containers of various shapes and sizes are processed through the Drum Washing Unit. Most of the hazardous waste containers entering the washer meet the definition of empty as defined in 40 CFR 261.7 with the possible exception of those containers which held acutely hazardous waste. The Drum Washing Unit is designed to further empty all containers so they will, if they do not already, meet the definition of empty as defined in 40 CFR 261.7. Thus, after they have been washed in the Drum Washing Unit nearly all of the containers are exempt from hazardous waste regulations. The drums which are washed are typically either disposed of, reused, or reconditioned for reuse. Drums may be crushed before they are shipped off-site for disposal.

The Drum Washing Unit is constructed primarily of carbon steel and is located in the Processing Area at CHK as shown in Figure M.1 in Appendix M-A. Figure M.12, Triple Rinse - HRI (Drawing D990043, Triple Rinse - HRI; BRI, Inc.) shows the dimensions and the configuration of the unit.

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M-2e(2) Drum Washing Unit compliance with standards for emissions or releases:
264.601 and 264.602

M-2e(2)(a) Prevention of releases to the subsurface environment or groundwater:
264.601 (a)

Releases of waste from the Drum Washing Unit to the subsurface or groundwater are extremely unlikely for these reasons.

- (1) The Drum Washing Unit is located in a secondary containment area which meets the requirements of 40 CFR 264 Subparts I and J. The containment has sufficient volume to contain a spill of the entire contents of the unit, and is coated with a material that is compatible with the wastes processed in the unit. Secondary containment volume calculations are included in appendices of Section D, Use and Management of Containers, and Section E, Tank Systems.
- (2) Various aspects of the condition of this unit and of the containment area are inspected each operating day or week, as described in Section F, Inspection Plan. Leaks or spills that might be associated with this unit are cleaned up within 24 hours of their discovery, or as soon as it is safe and practicable.
- (3) The unit is located inside a large containment area, and is physically separated and removed from any surface water,

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wetlands, or soil. The location of the facility relative to nearby bodies of water is shown in the topographic map in Section B, Facility Description.

- (4) CHK maintains a Contingency/Emergency Plan for use in situations such as a major spill, a fire, or an explosion. This plan incorporates measures to mitigate releases to the environment, and to protect human health and the environment from such releases.

M-2e(2)(b) Prevention of releases to surface water, wetlands or soil: 264.601(b)

Releases of waste from the Drum Washing Unit to surface water, wetlands, or soil are extremely unlikely for the reasons stated in M-2e(2)(a).

M-2e(2)(c) Prevention of releases to the air: 264.601(c)

The design and operation of the Drum Washer Unit controls releases of waste constituents to the air from the unit to prevent releases that may adversely affect human health or the environment. The containers processed in the Drum Washing Unit have been processed to remove the bulk of the waste they contained. Thus, the containers have only small quantities of waste remaining in them that can volatilize into the air. Furthermore, the washing apparatus is enclosed except for openings on either end for the containers to enter and exit. Also, the washing solvent used is typically diesel which is relatively non-volatile and therefore is unlikely to emit significant quantities of vapors. CHK is investigating methods to further reduce the potential for releases of airborne contaminants from the washer.

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The persons most likely to be exposed to potential air contaminants from this unit are CHK employees who work in the vicinity of the Drum Washing Unit (i.e., in the Processing Area).

The potential for contaminants reaching persons outside this area or outside the facility, if any such potential exists at all, is much lower.

M-2e(2)(d) Monitoring and Inspections: 264.602

The Drum Washing Unit and the surrounding area will be visually inspected each operating day for evidence of leaks or spills in accordance with the facility inspection plan described in Section F, Inspection Plan. The secondary containment system will also be inspected each operating day for evidence of cracks or breaches of containment in accordance with this inspection plan.

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M-3 Hydrologic, Geologic, and Meteorologic Assessments

Appendix M-F, Draft Preliminary Assessment Report for CHK contains a preliminary meteorologic, hydrologic and geologic assessment of the site. This assessment was part of a draft preliminary assessment report done as part of a RCRA facility assessment at CHK. Additional information on the meteorological conditions of the site is located in Section B, Facility Description.

Detailed hydrologic, geologic, and meteorologic assessments of the site are not appropriate for the types of miscellaneous units at CHK. Furthermore, these miscellaneous units have been designed, constructed, and are operated in a manner to protect human health and the environment by controlling potential releases. In particular, these units are operated in such a manner to prevent releases that might have adverse effects on human health or the environment due to migration of waste constituents in ground water, the subsurface environment, surface water, wetlands, soil surface, or the air as detailed in section M-2 of this application.

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M-4 Potential Pathways for Exposure

M-4a Shredder and Granulator Units - these units were closed in August, 1998.

M-4b Drum Scraper Unit

The primary potential pathway for exposure of humans or environmental receptors to hazardous constituents from the Drum Scraper Unit is exposure to vapors released to the air during the period that the drums of hazardous waste are open before and after they are processed in the Drum Scraper Unit, and to vapors released from the container while it is being processed in this unit. The amount of vapors released during the first case is very small since the drums are open for only a short period before and after they are processed in the unit. The amount of organic vapors released during the second case is also very small since the cylinder sleeve that extends into the container fits snugly enough, although it does not make an airtight seal, to keep most of the vapors from escaping. Because of the small quantity of vapors released, the only potential receptors would be facility employees who might be working next to the unit. These employees wear protective equipment and clothing to prevent them from being exposed to vapors that may be present at hazardous levels. A study was performed in August of 1991 at CHK to determine the potential for exposure of workers in the Processing Area (where the Drum Scraper Unit is located) to organic solvent vapors. The air in this area was monitored for six different organic compounds. Of these six compounds only

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three were detected, and they were detected in trace quantities that were well below the Occupational Safety and Health Administration (OSHA) permissible exposure levels for unprotected workers. A summary of the results of this study is contained in Appendix M-C. The emission controls discussed above prevent the exposure of receptors outside the process area to significant amounts of hazardous constituents.

The Drum Scraper Unit has been located within secondary containment to significantly reduce the possibility of any migration of hazardous waste or constituents into the ground or to surface waters.

M-4d Dispersing Unit

The primary potential pathway for exposure of humans or environmental receptors to hazardous constituents from the Dispersing Unit is exposure of facility employees working in the vicinity of the unit to organic vapors and other airborne contaminants released from the blending of materials in the unit. The potential for significant exposure is small since the Dispersing Unit Tank is covered and closed when materials are not being added or removed. Contaminant levels emitted to the air are very small, and do not present a potential for exposure to receptors outside the area of the unit. Data from air contaminant monitoring in the Processing Area is discussed in section M-2, and a summary of these data is presented in Appendix M-C, SK Air Monitoring Data. PPE is utilized by employees operating this unit to

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prevent potential exposure to hazardous emissions. The emission controls discussed above prevent the exposure of receptors outside the process area to significant amounts of hazardous constituents.

The Dispersing Unit has been located within secondary containment to significantly reduce the possibility of any migration of hazardous waste or constituents into the ground or to surface waters.

M-4e Drum Washing Unit

The primary potential pathway for exposure of humans or environmental receptors to hazardous emissions from the Drum Washing Unit is through exposure of facility employees to washing solvent vapors released during the washing operation. The potential for exposure to these vapors is small because the washing solvent (usually diesel) is not prone to vaporize and the washing operation is enclosed except for openings on either end of the unit for containers to enter and exit. The Drum Washing Unit is automated, which minimizes the need for an operator to stand next to the unit where the potential for exposure would be greatest. Workers in this area wear protective equipment and clothing to prevent potential exposure to hazardous emissions. The emissions controls discussed above prevent the exposure of receptors outside the Process Area to significant amounts of hazardous constituents.

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The Drum Washing Unit has been located within secondary containment to significantly reduce the possibility of any migration of hazardous waste or constituents into the ground or to surface waters.

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M-5 Effectiveness of Treatment

M-5a Shredder and Granulator Units - these units were closed in August, 1998

M-5b Drum Scraper Unit

The Drum Scraper Unit is able to mobilize solidified, non-dumpable waste within a drum to the extent that the majority of the waste can be dumped out of the drum by turning it upside down.

The technology used by the Drum Scraper Unit is established and in use in many industries. No reports on demonstrations of the effectiveness of the same or a similar treatment technology gathered under a RCRA research and development permit have been located.

M-5d Dispersing Unit

The Dispersing Unit is capable of mixing solid and liquid materials to form a pumpable liquid, with particulates generally no larger than one quarter of an inch in diameter, which is suitable as fuel for cement kilns.

The technology used in the Dispersing Unit is ordinary mixing and fluid transfer technology in common use throughout industry. No reports on demonstrations of the effectiveness of the

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same or a similar treatment gathered under a RCRA research and development permit are available.

M-5e Drum Washing Unit

The Drum Washing Unit is able to clean containers containing residues of waste to the extent that they meet the definition of empty as defined in 40 CFR 261.7, including containers which held acutely hazardous waste.

The technology used by the Drum Washing Unit is established container and liquid cleaning and handling technology. No reports on demonstrations of the effectiveness of the same or a similar treatment gathered under a RCRA research and development permit have been located.

M-6 Special Requirements for Handling Ignitable, Reactive and Incompatible Wastes

Clean Harbors Kansas, LLC has developed special provisions for ignitable, reactive, or incompatible wastes applicable to management of waste in containers and tanks. These provisions will be followed during processing of the waste in other regulated units as required under 40 CFR 264.17(c). These procedures are addressed in Section D, Container Management (Sections D-3f and D-3g), Section E, Tank Systems (Section E-3c), and in

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Section G, Procedures to Prevent Hazards (Section G-6). Additional information regarding precautions, equipment, and safety features used to prevent accidental ignition or explosion is presented in Section G, Procedures to Prevent Hazards.

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APPENDIX M-A

SECTION M FIGURES M.2 Through M.12

Figure Description

Corresponding Drawing Number

M.5. 55 Gallon Drum Scraper

Drawing D-35-52-800

M.6. Motor Location and Specifications

Drawing D-43-10-6-100 (HRI, Inc.)

M.8. 1129 Gallon Dispersing Tank

Drawing PD 12/3/91

M.9. 40/50/60 VSM 18 Disperser

Drawing DL34055 (FCF-Bowers)

M.10. Barrel Dump Assembly

Drawing PD 1/25/91

M.11. P&ID Process Areas

Drawing 665300-4-W404F (FD)

M.12. Triple Rinse, HRI

Drawing D990043 (BRI, Inc.)

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APPENDIX M-C

CHK AIR MONITORING DATA

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APPENDIX M-E

OPERATING MANUAL: DISPERSING UNIT

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**Appendix N-A - Facility and Process Drawings
Appendix N-B - Regional Administrator Letter
Appendix N-C - Monitoring Method and Equipment Documentation
Appendix N-D - Equipment Lists
Appendix N-E - Equipment Designated As No Detectable Emissions
Appendix N-F - Monitoring Results and Repair Reports**

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N-1 Air Emission Standards for Process Vents

N-1a Applicability

The Clean Harbors Kansas, LLC (CHK) facility stores, treats, and recovers for recycling hazardous waste and hazardous waste fuel. (For a more complete description of hazardous waste management activities at CHK, refer to Section B, Facility Description.) The hazardous waste management units at CHK are subject to the 40 CFR Part 270 permitting requirements by 265.1 (b) and 266.34(c) and are allowed to operate under 270.10 (e) according to interim status standards until a permit is issued. However, there are no regulated units currently operated at the CHK facility subject to the 40 CFR 264 Subpart AA process vent emissions standards.

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N-2 Air Emissions Standards for Equipment Leaks

N-2a Applicability

The CHK facility stores, treats and recovers for recycling hazardous waste and hazardous waste fuel. The waste lines and equipment are used at CHK to transfer hazardous waste liquids between or from waste storage tanks, or miscellaneous exempt units, or from or to trucks for off site receipt or shipment. It is assumed, based on knowledge of process, that the hazardous waste liquids or gases handled in these lines at the facility potentially contact hazardous waste in excess of ten (10) percent total organic carbon (TOC) and are therefore subject to these standards. Appendix N-A, Facility and Process Drawings, contains diagrams of the pertinent equipment and piping in use at CHK.

A majority of the equipment at the CHK facility is potentially in ten (10) percent, or greater, TOC hazardous waste liquid or gas service except for water, air, or fire suppressant lines. These lines are identified separately from all other lines by their color or labelling.

N-2b Pumps in Light Liquid Service

All pumps at the CHK facility are assumed to be in light liquid service at some time due to the

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varied nature of the wastes managed at the facility. Because the exact composition of the waste stream varies, a heavy liquid service designation is difficult to sustain during actual operations. Therefore, all pumps at the facility are potentially subject to light liquid service standards and will be monitored monthly to detect leaks using the method specified in 264.1063 (b) unless exempted by a classification of no detectable emissions.

All pumps at the facility are subject to regular RCRA inspections, as described in Section F, Inspection Plan. These will occur at a minimum of once per week to locate indications of liquids dripping from pump seals. If there are indications that liquids are dripping from the pump seal (e.g., staining of surrounding substrate, visible liquids), a leak is considered to be detected.

When a leak is detected, a first attempt at repair shall be made within five (5) calendar days and a permanent repair attempted within fifteen (15) calendar days of detection unless the standards of 264.1059 are met.

There are currently no pumps in operation at the CHK facility with a dual mechanical seal that includes a barrier fluid. When these types of pumps are installed, CHK will comply with the requirements of 40 CFR 264.1052 (d) if these pumps are to be exempted from monitoring requirements.

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There are several pumps at the CHK facility which are eligible for the "no detectable emissions" exemption from 264.1052 (a), (b), and (d) with an instrument reading of 500 ppm or less above background. These pumps have no externally actuated shaft that penetrates the pump housing, and operate with no detectable emissions (i.e., less than 500 ppm measured by the method specified in 264.1063 (c)) and have been initially tested for compliance with this standard and will be tested annually for leaks above 500 ppm. Pumps which are eligible for the "no detectable emissions" exemption will be tested when requested by the Regional Administrator, as specified in 40 CFR 264.1052(e)(3).

N-2c Compressors

There are no compressor units subject to air emission standards at the CHK facility.

N-2d Pressure Relief Devices

There are no pressure relief devices installed on equipment subject to the 40 CFR Subpart BB regulations currently being operated in hazardous waste gas/vapor or liquid service at CHK.

N-2e Sampling Connection Systems

All sampling systems at the CHK facility are of the *in situ* type, are used in-line, and are not subject to subparagraphs (a) and (b) of 264.1055. These systems typically consist of a valve with an open ended line. This equipment is subject to the leak emissions standards and is

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included in the monitoring plan as required by 264.1056 or 264.1057. This system is operated in method consistent with the basis for the standards contained in 264.1055 (a) and (b) in that any purged waste prior to sampling is returned to the process.

N-2f Open-ended Valves or Lines

All open-ended valves and lines at the CHK facility are equipped with caps or plugs intended to seal the open end when the line or valve is not in service. All double block lines at the facility (i.e., lines with two valves) are operated such that the valve on the hazardous waste stream side is closed before the second valve is closed.

N-2g Valves in Gas/Vapor Service or in Light Liquid Service

All valves at the CHK facility are assumed to be in ten (10) percent or greater organic content light liquid gas/vapor service at some time due to the varied nature of the wastes managed at the facility. Because the exact composition of the waste streams varies, a heavy liquid service designation is difficult to sustain during actual operations. Therefore all valves at the facility are potentially subject to light liquid service requirements and will be treated as being in light liquid service for the purpose of complying with the air emission regulations. This designation assures that CHK complies with the requirements of 264.1063 (g).

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Valves will be monitored monthly to detect leaks using the method specified in 264.1063 (b) unless exempted according to 264.1061 or according to 264.1057 (f), (g), or (h). If an instrument reading in excess of 10,000 ppm is measured during monitoring, a leak subject to the repair provisions of this program is detected.

When a leak is detected, a first attempt at repair shall be made within five (5) days and a permanent repair attempted within fifteen (15) calendar days of detection unless the standards of 264.1059 are met. First attempts at repair shall include tightening of bonnet bolts, replacement of bonnet bolts, tightening of packing gland nuts, and/or injection of lubricant into lubricated packings.

There are no valves in use at the CHK facility eligible for the no detectable emission exemption. Similarly, there are no valves designated as unsafe-to-monitor.

There are numerous valves designated as difficult-to-monitor pursuant to this paragraph on the existing units that were in operation prior to June 21, 1990. These valves have been determined to be difficult to monitor due to their location or elevation as specified in 264.1064 (h) (2). All valves currently designated as difficult-to-monitor are so designated in the log because of their location at or above two meters above a supported surface. Valves that have been identified as difficult-to-monitor are identified in the tables in Appendix N-D by the identification number P-XXXU/PXXXU or M-XXXU/MXXXU. These valves will be

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monitored according to this written plan for obtaining access to these valves for monitoring at a minimum of once per year.

N-2h Pumps & Valves in Heavy Liquid Service; Flanges, and Other Connectors

There are no pumps or valves designated in heavy liquid service at the CHK facility. Flanges and other connectors shall be monitored within five (5) calendar days by the method specified in 264.1063 (b) if evidence of a potential leak is found by visual, audible, olfactory, or other method. These potential leaks will normally be initially identified by observation of dripping or accumulated liquids or of stained substrate during scheduled inspections of the tank system and associated piping.

When a leak is detected, a first attempt at repair shall be made within five (5) calendar days and a permanent repair attempted within fifteen (15) calendar days of detection unless the standards of 264.1059 are met.

The practices specified in paragraph 264.1057 (e) shall constitute a first attempt at repair.

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N-3 Delay of Repair

In the event that any repair of a connection, pump, or valve associated with a process unit must be delayed beyond fifteen (15) calendar days because it requires the shutdown of the hazardous waste management unit, that repair shall be completed during the next unit shutdown.

A delay of any other repair of a connection, pump, or valve will extend beyond the (15) days only if the equipment for which a leak has been detected can be isolated from the system and no longer contacts hazardous waste liquid or gas/vapor in concentrations exceeding ten (10) percent by weight.

N-3a Valves:

In delaying a repair of a valve beyond fifteen (15) calendar days, CHK will follow procedures as specified by 40 CFR 1059. CHK will determine whether or not the emissions from an immediate repair would exceed those likely to result from the procedures that would be used if repair could be delayed. Delay of repair will only occur when the emissions would be reduced by the delay, when the equipment is isolated from the hazardous

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waste management unit, or when the repair is technically infeasible without a hazardous waste management unit shutdown (in this case, the repair shall occur before the end of the next hazardous waste management unit shutdown). Delay of repair of a valve beyond the next hazardous waste management unit shutdown will only occur if valve assembly replacement is necessary during the shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before supplies were depleted. Delay of repair beyond the next hazardous waste management unit shutdown will only occur if the next hazardous waste management unit shutdown occurs sooner than six months after the first hazardous waste management unit shutdown.

CHK will comply with 40 CFR 264.1059 when repair of a valve is delayed. If delay of repair is performed in accordance with 40 CFR 264.1059(c)(2), the purged material collected during the repair will be destroyed or recovered in a control device complying with 40 CFR 264.1060, and to 40 CFR 1033.(h), 1033(i), and/or 1033(j).

Repairs of valves may be delayed at CHK beyond the first unit shutdown in the event that the repair requires spare parts which were well stocked prior to the shutdown but were depleted and unavailable at the time of shutdown. Additional delays beyond the second unit shutdown will only occur if the second shutdown occurs within six (6) months after the first.

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N-3b Pumps:

Repairs of pumps will be delayed by CHK beyond fifteen (15) calendar days if the repair requires the use of a dual mechanical seal and barrier fluid system. Such delayed repairs of pumps will be completed as soon as practicable but no later than six (6) months from the time the leak was detected.

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N-4 Alternative Standards - Valves in Gas/Vapor Service or Light Liquid Service:

N-4a Percentage of Valves Allowed to Leak

All valves at the CHK facility in light liquid or gas service are identified on the attached drawings, are associated with hazardous waste management units, are subject to 264.1057, and are eligible for this alternative standard. CHK elects to meet the two (2) percent standard for valves by meeting the following requirements of 264.1061 (b) (1) - (3).

A copy of the letter notifying the Regional Administrator of CHK's implementation of this alternative standard is included in Appendix N-B.

A performance test using the method specified in 264.1063 (b) was performed on all identified valves at the facility on December 17, 1990. No leaks greater than 10,000 ppm were detected in any valves. This test shall be repeated annually and at the request of the Regional Administrator.

Future annual performance tests shall detect a leak if readings exceed 10,000 ppm. If a leak is detected, it will be repaired in accordance with 264.1057 (d) and (e).

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Future annual performance tests shall calculate the percentage leak rate by dividing the number of valves with readings in excess of 10,000 ppm by the total number of valves eligible. The initial performance test conducted in December 1990 did not detect any leaking valves. The resulting leak rate for the initial performance test of zero (0) percent meets the two (2) percent standard.

Should CHK decide to discontinue meeting this alternative standard, the Regional Administrator will be notified.

N-4b Skip Period Leak Detection and Repair

CHK does not elect to meet this alternative standard for valves in the regulated service at this time. Should CHK elect to meet this alternative standard in the future, the Regional Administrator shall be notified and the program revised to comply with 264.1062 (b).

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N-5 Test Methods and Procedures

The test methods used by CHK comply with 264.1063. Relevant instrument and method information is included in this document as Appendix N-C.

Monitoring performed at CHK is done in accordance with Method 21 as set forth in 40 CFR Part 60.

The instrument currently being used for monitoring is a Foxboro OVA Model 108; other instruments may be utilized depending on performance and instrument availability. The performance criteria for this instrument against Method 21 requirements are well documented and are included in Appendix N-C. The instrument is calibrated according to Method 21 requirements and the results documented as part of the monitoring. Examples of calibration forms for documenting this information appear in Appendix N-C. Calibration gases conform to Method 21 requirements and are documented with each calibration (see Appendix N-C). Future monitoring procedures, monitoring equipment, and calibration of that equipment shall comply with 40 CFR 264.1063.

N-5a Testing for No Detectable Emissions

The only equipment at CHK designated as meeting the "no detectable emission" standard are pumps meeting the criteria of 264.1052 (e). These pumps will be monitored annually

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following the procedures of 264.1052 (b). The background levels will be recorded as set forth in Method 21 in determining the leakage rates from these pumps.

When monitoring for leaks, the instrument probe is traversed around all potential leak sources from these pumps as close to the interface as possible as described in Method 21.

The background value shall be subtracted from the highest reading on each pump in determining compliance with the 500 ppm level for no detectable leakage.

N-5b Testing Organic Concentration

All identified hazardous waste equipment in waste service contacts ten (10) percent or greater liquid wastes. CHK has made this determination based on knowledge of the waste streams handled by CHK and complies with 264.1063 (g). Additional testing using methods stipulated by paragraphs 264.1063 (d) (1) and (2) for this initial designation is not required at CHK. Since all identified hazardous waste equipment has been designated as being in light liquid, ten (10) percent or greater organic liquid waste service, documentation of this determination based on knowledge of process is not required.

Should CHK determine that a system can be designated as contacting less than ten (10) percent organic concentration streams, or the Regional Administrator does not agree that a stream

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contains less than ten (10) percent by weight organics, the determination will only be revised after following the procedures in 264.1063 (d) (1) or (2).

Any samples used to determine the percent organic content shall be representative of the highest total organic content hazardous waste that is expected to be handled in or contact the equipment.

Since all equipment at the CHK facility has been designated in light liquid service, no waste constituent vapor pressure determinations are necessary.

No control device efficiency tests are performed at the CHK facility since emissions reductions using control devices are not required by 264.1034.

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N-6 Recordkeeping Requirements

CHK is subject to the leak detection and repair requirements only and has no closed vent or control devices. The recordkeeping provisions of this paragraph for the Subpart BB program only apply to CHK. Although CHK is owned by Clean Harbors and is part of a multiple facility system subject to these standards, CHK elects to maintain the required records on site. Additional information on this program for CHK may also be maintained at Clean Harbors corporate office in Braintree Massachusetts.

N-6a Equipment Information

The identification numbers for equipment subject to leak detection and repair requirements and associated hazardous waste management units appear in the Tables in Appendix N-D. The numbers separate the equipment into two categories. Valves and connections are identified with PXXX number, pumps are identified by a MXXX number. These numbers are unique to each piece of equipment.

Drawings of the process and facility plot plan are included in Appendix N-A. These drawings also show each piece of equipment subject to these standards and their identification numbers.

The exact location of each piece of equipment is identified for monitoring and repair tracking

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from this information.

The tables in Appendix N-D include equipment descriptions, types, models, serial numbers, and operating characteristics where available.

Hazardous waste streams handled at the CHK facility have been assumed to exceed the ten (10) percent organic content limit and a majority are liquids. The gas/vapor service equipment is identified by type of associated process. This service is limited to equipment on condensers and vent lines, and is identified in the tables included in Appendix N-D. All pipelines subject to these standards are identified as being in either vapor or liquid service in the pipe line lists in Appendix N-D. Light liquid services are identified by the identification number for the pipeline in which the equipment is installed. K-XXX represents a kiln fuel service, N-XXX represents a non-chlorinated organics service, C-XXX represents a chlorinated organics service, W-XXX represents an aqueous organics service, and O-XXX represents waste oil service.

Each piece of equipment subject to 40 CFR Subpart BB standards is marked in such a manner that it can be distinguished readily from other pieces of equipment. Markings include identification tags and/or color coding as appropriate.

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N-6b Method Of Compliance

Pumps are monitored monthly in accordance with 264.1052 (a), (b), and (c); except for those pumps listed in Appendix N-E. Those pumps are tested for compliance with no detectable emissions standards annually.

Valves are tested annually for leaks in accordance with 264.1061, (standards allowing no greater than two (2) percent of the valves to leak); except for those valves that are designated as difficult to monitor. These valves are monitored for leaks annually.

Flanges and other connectors are inspected weekly and monitored if evidence of a leak is found.

All open-ended valves and lines at the CHK facility are equipped with caps or plugs intended to seal the open end when the line or valve is not in service. All double block lines at the facility are operated such that the valve on the hazardous waste stream side is closed before the second valve is closed.

N-6c Control Devices

No control devices are required on the units at the CHK facility, so no implementation schedule for their installation, their design, or performance test plans have been prepared.

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N-6d Leak Identification

Whenever a leak is detected on any equipment, a weatherproof tag shall be attached showing the equipment identification number, the date a potential leak was visually identified, the date a leak was detected in accordance with 264.1058 (a). This equipment identification tag will be removed after repair except for valves.

The equipment identification tag will remain on repaired valves until two (2) successive months of monitoring indicate that the leak has been repaired by measurements less than 10,000 ppm.

When a leak has been detected by exceeding a 10,000 ppm measurement, information on the leak and its repair will be documented and made part of the operating record. An example of the leak reports and repair records are included in Appendix N-F. This information shall include the following.

- The instrument and operator and the leaking equipment identification number.
- The date a potential leak was identified.
- The date a leak was detected by exceeding 10,000 ppm on the instrument and the date of each attempted repair.

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- The repair method applied with each attempt to repair the leak.
- The monitoring results following each repair attempt and the indication of "greater than 10,000 ppm" if the reading is above 10,000 ppm.
- The notation "Repair Delayed" if repairs are delayed past fifteen (15) days.
- Documentation of the repair delay in accordance with 264.1059 (c).
- The signature of the owner or operator whose decision it is to delay the repair due to the need for a hazardous waste management unit shutdown.
- The expected date of successful repair of the leak if it is not repaired within fifteen (15) days.
- The date of successful repair.

N-6e Equipment List

The list of equipment subject to the requirements of 264.1052 through 264.1060 appears in the tables in Appendix N-D.

N-6f No Detectable Emission Equipment

A list of equipment designated by CHK as meeting the no detectable emissions standards for pumps from 264.1052 (e) appears in Appendix N-E along with a statement signed by Clean

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Harbors designee at the CHK facility.

The dates of the compliance tests, the background value, and the highest value measured for each pump designated according to 264.1052 (e) and identified according to paragraph (g) (2) (i) of this section appears in Appendix N-F along with all field records of the monthly monitoring performed on all regulated equipment at the CHK facility.

N-6g Pressure Relief and Vacuum Equipment

There are no pressure relief devices at the CHK facility subject to this requirement.

N-6h Difficult to Monitor Valves

Valves that have been identified as difficult to monitor are identified in the tables in Appendix N-D by the identification number P-XXXU/PXXXU or M-XXXU/MXXXU. CHK does not elect to identify any equipment as unsafe-to-monitor at this time. The difficult-to-monitor valves identified pursuant to 264.1057 (h) listed in the tables in Appendix N-D are all located at or above two (2) meters above a supported surface. The valves will be monitored annually when a portable structure capable of safely supporting monitoring personnel can be scheduled.

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N-6i Process Information for Exemptions

Information is available in the facility records that indicate the design capacity of the hazardous waste management units.

The facility operating record includes information on the influent and effluent of each hazardous waste management unit subject to these requirements.

No hazardous waste management unit exclusively handles heavy liquids and all equipment is covered by sections of the requirements which apply to light liquids. All identified hazardous waste equipment in waste service contacts waste with ten (10) percent or greater organics.

CHK has made this determination based on knowledge of the waste streams. No exemptions are currently being claimed on the basis of weight percent organics in the waste stream or type of liquid service (heavy or light). This information constitutes the supporting information on the applicability of these requirements at the CHK facility and will be updated on a regular basis.

N-6j Operating Information

The records required by 264.1064 (d) and (e) will be maintained on site for a period of three years.

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N-6k Additional Fugitive Emission Requirements

CHK is not subject to the additional requirements from 40 CFR Part 60, subpart VV; or Part 61, subpart V; and therefore cannot document compliance with this section using duplicative information.

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Appendix A - Facility and Process Drawings

Appendix N-A - Facility and Process Drawings

Drawing Number	Sheet	Subject
665300-4-W401	1 of 9	Legend & Symbology
665300-4-W404B	3 of 9	Sparging Room I - Round Spargers System
665300-4-W404C	4 of 9	Sparging Room II - Rectang. Spargers System
665300-4-W404D	5 of 9	Storage Tank Room I/V-9 Thru V-14
665300-4-W404E	6 of 9	Storage Tank Room II/V-15 A-D & V-16
665300-4-W404F	7 of 9	Process Areas /V-17, P11 & P-5 Pump Details
665300-4-W404G	8 of 9	Tank Farm I/V-1, V-2, V-3 & V-4
665300-4-W404H	9 of 9	Tank Farm II/V-5 Thru V-8/N & S Manifolds
665300-4-W050	1 of 1	Piping Plot Plan
665300-4-W510-1	1 of 2	Piping Transposition - Process Area
665300-4-W510-2	2 of 2	Piping Transposition - Process Area
665300-4-W511-1	1 of 2	Piping Transposition - Tank Farm
665300-4-W511-2	2 of 2	Piping Transposition - Tank Farm
665300-4-W512	1 of 1	Piping Transpositon - Storage Tank Room
665300-4-W513	1 of 1	Piping Transpositon - Sparger Room
665300-4-W514	1 of 1	Piping Transpositon - Solids Process Area

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Appendix B - Regional Administrator Letter

Appendix N-B - Regional Administrator Letter

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Appendix C - Monitoring Method and Equipment Documentation

Appendix N-C - Monitoring Method and Equipment Documentation

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Appendix D - Equipment Lists

Appendix N-D - Equipment Lists

Appendix N-D.1 - Piping Component Data Sheets

Appendix N-D.2 - Piping Line List

Appendix N-D.3 - Equipment Data Sheets

Appendix N-D.4 - Location of Equipment Monitoring Points

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Appendix D - Equipment Lists

Appendix N-D.1 - Piping Component Data Sheets

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Appendix D - Equipment Lists

Appendix N-D.2 - Piping Line List

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Appendix D - Equipment Lists

Appendix N-D.3 - Equipment Data Sheets

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Appendix D - Equipment Lists

Appendix N-D.4 - Location of Equipment Monitoring Points

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Appendix E - Equipment Designated As No Detectable Emissions

Appendix N-E - Equipment Designated As No Detectable Emissions

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Appendix F - Monitoring Results and Repair Reports

Appendix N-F - Monitoring Results and Repair Reports

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